MARICOPA ASSOCIATION of GOVERNMENTS

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May 15, 2008

TO: Members of the MAG Water Quality Advisory Committee

FROM: Roger Klingler, City of Scottsdale, Chair

SUBJECT: MEETING NOTICE AND TRANSMITTAL OF TENTATIVE AGENDA

Thursday, May 22, 2008 - 8:30 a.m.*
MAG Office, Suite 200 - Saguaro Room
302 North 1st Avenue, Phoenix

Please park in the garage underneath the building. Bring your ticket to the meeting; parking will be validated. For those using transit, the Regional Public Transportation Authority will provide transit tickets for your trip. For those using bicycles, please lock your bicycle in the bike rack in the garage.

Pursuant to Title II of the Americans with Disabilities Act (ADA), MAG does not discriminate on the basis of disability in admissions to or participation in its public meetings. Persons with a disability may request a reasonable accommodation, such as a sign language interpreter, by contacting Jason Stephens at the MAG office. Requests should be made as early as possible to allow time to arrange the accommodation.

Members of the MAG Water Quality Advisory Committee may attend in person, by videoconference or by telephone conference call. Those attending by videoconference must notify the MAG site three business days prior to the meeting.

Please be advised that under procedures approved by the MAG Regional Council, all MAG committees need to have a quorum to conduct the meeting. A quorum is a simple majority of the membership. If you are unable to attend the meeting, please make arrangements for a proxy from your entity to represent you.

* Please note the earlier start time for this meeting.

TENTATIVE AGENDA

COMMITTEE ACTION REQUESTED

1. Call to Order

2. Agenda Announcements

   2. For information.

3. Call to the Audience

   3. For information.

   An opportunity will be provided to members of the public to address the Water Quality Advisory Committee on items not scheduled on the agenda that fall under the jurisdiction of MAG, or on items on the agenda for discussion but not for action. Members of the public will be requested not to exceed a three minute time period for their comments. A total of 15 minutes will be provided for the Call to the Audience agenda item, unless the Water Quality Advisory Committee requests an exception to this limit. Please note that those wishing to comment on action agenda items will be given an opportunity at the time the item is heard.

4. Approval of the May 1, 2008 Meeting Minutes

   4. Review and approve the May 1, 2008 meeting minutes,

5. Salt River Pima-Maricopa Indian Community Consultant Report Regarding the Draft Small Plant Review and Approval for the Preserve at Goldfield Ranch Water Reclamation Facility

   5. For information, discussion, and possible action.

   Maricopa County has requested that MAG review the proposed Preserve at Goldfield Ranch Water Reclamation Facility through the Small Plant Review and Approval Process of the MAG 208 Water Quality Management Plan. The proposed facility would have an ultimate capacity of 400,000 gallons per day and reclaimed water would be disposed of through reuse and recharge. The Fort McDowell Yavapai Nation and Salt River Pima-Maricopa Indian Community are within three miles of the project and both have expressed

concern about the Draft Small Plant Review and Approval.

On March 20, 2008, the MAG Water Quality Advisory Committee heard presentations from the Preserve at Goldfield Ranch, the Fort McDowell Yavapai Nation, and the Salt River Pima-Maricopa Indian Community. Following approximately two and one-half hours of presentations and discussion, the Committee recommended approval of the Draft Small Plant Review and Approval for the proposed facility.

On April 9, 2008, the MAG Management Committee heard presentations from the Preserve at Goldfield Ranch, the Fort McDowell Yavapai Nation, and the Salt River Pima-Maricopa Indian Community. Following discussion, the Committee recommended approval of the Draft Small Plant Review and Approval for the proposed facility recognizing the commitment volunteered by the developer to treat the effluent at a level higher than required by the state: 10 milligrams per liter (mg/l) for total suspended solids, 10 mg/l for biochemical oxygen demand, 5 mg/l for total nitrogen, and 1 mg/l (85 percent efficiency) for total phosphorus.

As the April 23, 2008 MAG Regional Council agenda was being drafted, the President of the Salt River Pima-Maricopa Indian Community requested a one-month delay to provide them an opportunity to hire an independent consultant to investigate information brought forward by the Salt River Project in an April 8, 2008 letter. As the Chair of the Regional Council described in an April 28, 2008 memorandum, the item has been postponed for one month until the May 28, 2008 Regional Council meeting. Also indicated in the memorandum, the Salt River Pima-Maricopa Indian Community assured the Chair of the Regional Council that they would quickly hire a consultant and report back to the

Regional Council in May. The Chair of the Regional Council also mentioned that he believed it would be important for their study to be reviewed by members of the Water Quality Advisory Committee prior to the May Regional Council meeting. Also, MAG received a May 13, 2008 letter from the Arizona Department of Environmental Quality regarding the project. Please refer to the enclosed material.

6. Call for Future Agenda Items

The Chairman will invite the Committee members to suggest future agenda items.

6. For information and discussion.

MINUTES OF THE
MARICOPA ASSOCIATION OF GOVERNMENTS
WATER QUALITY ADVISORY COMMITTEE MEETING

Thursday, May 1, 2008
MAG Office Building
Phoenix, Arizona

MEMBERS ATTENDING

* Roger Klingler, Scottsdale, Chair
* Marilyn DeRosa, Avondale
David Johnson for Lucky Roberts, Buckeye
Jacqueline Strong, Chandler
* Dave Emon, El Mirage
# Lonnie Frost, Gilbert
Russell Fletcher for Chris Ochs, Glendale
David Iwanski, Goodyear
Bill Haney, Mesa
Stephen Bontrager, Peoria
Glenda Novak for Robert Hollander, Phoenix
Rich Williams Sr., Surprise
* David McNeil, Tempe
# Kevin Chadwick, Maricopa County
* John Boyer, Pinnacle West Capital
* Ray Hedrick, Salt River Project
* Erin Taylor, U of A Cooperative Extension
Michael Byrd, Salt River Pima-Maricopa Indian Community

*Those members neither present nor represented by proxy.
#Attended by telephone conference call.

OTHERS PRESENT

Kathy Haines, Goldfield Ranch resident
Randy Haines, Goldfield Ranch resident
Chris Henninger, Arizona Department of Environmental Quality
Edwina Vogan, Arizona Department of Environmental Quality
Joanne Rhyner, Arizona Department of Environmental Quality
Jessica Marlow, Town of Cave Creek
Al Dreska, Parsons
Carol A. Johnson, Parsons
Robert Shulz, Burns & McDonnell
Roger Greaves, Burns & McDonnell
Tom Avayfuay, Garney Construction
Julie Hoffman, Maricopa Association of Governments
Patrisia Magallon, Maricopa Association of Governments

1. Call to Order

A meeting of the MAG Water Quality Advisory Committee was conducted on Thursday, May 1, 2008. David Iwanski, City of Goodyear, Acting Chair, called the meeting to order at approximately 3:02 p.m. Bill Haney, City of Mesa; Jacqueline Strong, City of Chandler; Lonnie Frost, Town of Gilbert; Kevin Chadwick, Maricopa County; and Stephen Bontrager, City of Peoria, attended the meeting via telephone conference call.

Julie Hoffman, Maricopa Association of Governments (MAG), introduced Michael Byrd, Salt River Pima-Maricopa Indian Community, as a new member of the MAG Water Quality Advisory Committee.

2. Agenda Announcements

Acting Chair Iwanski provided an opportunity for member agencies to report on activities of interest in their agencies.

3. Call to the Audience

Acting Chair Iwanski provided an opportunity for members of the public to address the Committee on items not scheduled on the agenda that fall under the jurisdiction of MAG or items on the agenda for discussion but not for action.

Acting Chair Iwanski recognized public comment from Kathy Haines, Goldfield Ranch resident. Ms. Haines discussed the MAG public participation program of the MAG 208 Water Quality Management Plan. She said the objective is to solicit from the public their opinions and perception of problems, issues, concerns, and needs. Ms. Haines defined the term solicit as to seek for something by entreaty, by earnest or respectful request. She referred to the Draft Small Plant Review and Approval for the Preserve at Goldfield Ranch Water Reclamation Facility discussed at the March 20, 2008 MAG Water Quality Advisory Committee meeting. Ms. Haines stated that public input was not solicited. She mentioned adjusting the public participation program. Ms. Haines stated that she can provide critical facts with regard to the Goldfield Preserve project. She said that the site for the water reclamation facility has moved and is now wedged on a peninsula surrounded by jurisdictional washes. Ms. Haines commented on the facility meeting only one third of the future needs. She also discussed hauling sludge off-site and the community within three miles of the facility. She stated that public input is most critical when a municipality is not involved with the facility. Ms. Haines commented on the Committee's recommendation on the project. She discussed having a public participation program with prominent indication of public solicitation. Ms. Haines stated that although informative, MAG needs to do more than have a passive website. Acting Chair Iwanski thanked Ms. Haines for her comments.

4. Approval of the March 20, 2008 Meeting Minutes

The Committee reviewed the minutes from the March 20, 2008 meeting. David Johnson, Town of Buckeye, moved and Glenda Novak, City of Phoenix, seconded, and the motion to approve the March 20, 2008 meeting minutes carried unanimously.

5. Draft MAG 208 Water Quality Management Plan Amendment for the Town of Cave Creek Water Reclamation Facility

Roger Greaves, Burns & McDonnell, provided a presentation for the Town of Cave Creek MAG 208 Plan Amendment. He presented a regional map showing the location of the Cave Creek Water Reclamation Facility (WRF). Mr. Greaves also provided a map of the service area for the facility which is approximately 42 square miles. He discussed the areas that are currently sewered. Mr. Greaves presented the population projections for the Town of Cave Creek. He indicated that by the year 2030, the population for the Town is projected to be 9,656. He added that the total projected wastewater flow in the year 2030 will reach to 1,788,622 gallons per day.

Mr. Greaves stated that the existing Cave Creek Wastewater Treatment Plant was installed in 1998 with an original capacity of 0.233 million gallons per day (mgd). He mentioned that due to high BOD and TSS loadings, the plant has been derated to a capacity of 0.133 mgd. He added that the current average daily flow is 0.130 mgd and therefore the plant is at its limit. Mr. Greaves discussed the current Aquifer Protection Permit (APP) and Arizona Pollutant Discharge Elimination System (AZPDES) Permit for the existing plant. He mentioned that reclaimed water generated by the Town of Cave Creek is discharged to the Rancho Manana Golf Course ponds. Mr. Greaves stated that the existing plant will be decommissioned once the new facility is operational. Mr. Greaves discussed the proposed Cave Creek WRF. He added that the facility would have an initial capacity of 0.75 mgd and an ultimate capacity of 2.25 mgd. Mr. Greaves indicated that the facility would produce Class A+ effluent. He mentioned that the facility's initial disposal options would be to the golf course ponds and an emergency overflow to Galloway Wash which is tributary to the Cave Creek Wash. Mr. Greaves stated that an additional AZPDES Permit may be obtained for the Cave Creek Wash. He added that the dewatered biosolids would be hauled to a landfill.

Mr. Greaves stated that the Cave Creek Water Reclamation Facility would have an influent pump station and mechanical screen. He added that the facility would also have grit removal. Mr. Greaves mentioned that the process would be a Sequencing Batch Reactor (SBR). He indicated that the facility would have tertiary filtration, chlorination/dechlorination, an effluent pump station, sludge holding tank and sludge dewatering. Mr. Greaves stated that the facility would have odor control for buildings and basins. He added that they have gone to great lengths to make sure residents cannot hear, see or smell the facility. Mr. Greaves mentioned that the facility would have standby power. He mentioned that for noise control, the facility would have berms and enclosures. Mr. Greaves stated that there would be a trunk line from the existing wastewater treatment plant to the water reclamation facility. He added that the reclaimed water would go back to the golf course.

Mr. Greaves discussed the site plan for the Cave Creek WRF. He provided a mature landscape of the projected Cave Creek Water Reclamation Facility. Mr. Greaves showed the locations of the Cave Creek Wash and Carefree Highway in relation to the proposed facility. He discussed the construction phases. Mr. Greaves stated that phase one will be operational in October 2009 with a capacity of 0.75 mgd. He added that phases two and three, 1.5 mgd and 2.25 mgd, respectively, would be developed as required. Mr. Greaves mentioned that the Town has undertaken the first phase of the WRF as a design/build/operate (DBO). He indicated that the team includes Garney Constructors, Burns & McDonnell, and Arizona American. Mr. Greaves commented that Arizona American would operate the first phase of the WRF for the first two years. He added that at the end of the two years, Cave Creek would have the option to operate the facility themselves or contract with a company for the operation.

Mr. Greaves discussed the permits required for the facility. He also mentioned facility financing. Mr. Greaves stated that the first phase would be financed through a Town bond election. He indicated that funding has been obtained from the Water Infrastructure and Finance Authority of Arizona (WIFA). Mr. Greaves mentioned that the loan would be repayed with user fees, connection fees, development fees and sales tax revenue.

Rich Williams, City of Surprise, inquired about the high strength waste mentioned in the presentation. Mr. Greaves responded that the design BOD level is 470 milligrams per liter (mg/l)

and the TSS level is 570 mg/l. He stated that a lot of the high strength loadings are produced from the restaurants. Mr. Greaves added that the Town of Cave Creek does have a pretreatment ordinance in place and are taking steps to decrease the loads. Mr. Williams commented on the SBR process and inquired about the provision for upsets. Mr. Greaves replied that the SBR has two basins. Therefore, if one basin is upset, the other basin is flow through and treats all the wastewater. Ms. Novak commented on the chlorine contact basin and inquired about the products that would be used. Mr. Greaves responded that sodium hypochlorite would be used as the disinfecting agent and sodium metabisulfite would be used for dechlorination.

Lonnie Frost, Town of Gilbert, inquired about the disposal options listed in the amendment. Mr. Greaves responded that the Cave Creek WRF plans to reuse at the Rancho Manana Golf Course and discharge to the Galloway Wash. He added that an additional AZPDES Permit discharge would be obtained to the Cave Creek Wash if required. In addition, the Town of Cave Creek is exploring other areas for reuse. Mr. Frost inquired if there was intent to recharge. Mr. Greaves responded no, not at this time. Mr. Williams moved to authorize that a public hearing be conducted on the Draft MAG 208 Water Quality Management Plan Amendment for the Town of Cave Creek Water Reclamation Facility. Russell Fletcher, City of Glendale, seconded and the motion was unanimously passed through a roll call vote by the Committee.

6. Arizona Construction General Permit for Stormwater Discharges

Christopher Henninger, Arizona Department of Environmental Quality, provided a presentation on the AZPDES Construction General Permit. He discussed the history of the stormwater permitting program. Mr. Henninger mentioned the AZPDES Permit which began at ADEQ in 2002. He also stated that the AZPDES Construction General Permit has a five year lifespan and became effective on February 29, 2008. He discussed the acronyms used by ADEQ such as AZPDES, the Construction General Permit (CGP), the Municipal Separate Storm Sewer System (MS4), Notice of Intent (NOI), Notice of Termination (NOT), Best Management Practice (BMP), and the Stormwater Pollution Prevention Plan (SWPPP). Mr. Henninger stated that he would present the differences between the draft and final permit. He added that there were a few changes made between the 2003 and 2008 permit documents. He mentioned that ongoing construction will have 120 days to transfer coverage.

Mr. Henninger indicated that the draft permit had no provision for default authorization. He added that the final permit includes a default authorization of seven days after receipt of the NOI. Mr. Henninger indicated that the operator must submit the default authorization in a manner to confirm the Department's receipt. He stated that for ongoing construction, the draft permit included 90 days to reapply for the permit. Mr. Henninger added that the provision was extended in the final to 120 days; however, the SWPPP must be updated to the 2008 permit within 90 days. He discussed the permit requirements related to the Arizona Board of Technical Registration (BTR). Mr. Henninger mentioned that the draft included that in preparing the SWPPP, the operator must comply with the BTR requirements. He indicated that the statement was removed from the final; however, it does not relieve the duty to comply with requirements if the BTR determined it applicable.

Mr. Henninger discussed the inspection schedule in the permit. He stated that the draft increased the inspection frequency during monsoon seasons and deleted the 28 day dry weather inspection

frequency. He added that the final permit included the inspection schedule that is consistent with the former permit except with the deletion of dry weather. Mr. Henninger mentioned that in the draft permit, certain BMPs were required to be maintained within 24 hours. He gave the example that silt fencing is used to retain sediments. Mr. Henninger commented that the final document changed the BMP maintenance to be seven calendar days or before the next anticipated rain event (whichever is sooner). He stated that the draft permit had the provisions for bypass and upsets removed since they were addressed in the Arizona Revised Statutes. Mr. Henninger indicated that these standard permit conditions were added back to the final permit pursuant to 40 Code of Federal Regulations (CFR) 122.41 (m) and (n).

Mr. Henninger discussed the definitions that have been added to the permit which include receiving water, rain event, business day, and day. He indicated that ADEQ received many requests for the definitions. Mr. Henninger discussed the ADEQ response to comments on concrete washout, vehicle and equipment washdown areas, sediment and erosion controls, stockpiles, perimeter controls, SWPPP availability, inlet protection and monitoring plans. He mentioned concrete washout and the washdown of equipment such as trucks, pumps, mixers, tools and wheelbarrows. He discussed the conditions that are met for concrete washout as part of the APP General Permit. Mr. Henninger presented pictures of proper and improper concrete washout disposals.

Mr. Henninger discussed vehicle wash down. He stated that the permit removed vehicle washing as allowable non-stormwater discharges. Mr. Henninger added that the permit removed it in order to be consistent with the APP permitting rules. He mentioned that if vehicle equipment washing is conducted, the operator must comply with A.A.C. R18-9-303.

Mr. Henninger commented on sediment and erosion controls. He stated that an erosion control covers a surface to prevent erosion. Mr. Henninger discussed the measures for stabilization which include vegetation, mulch, erosion blanket, rock/rip-rap and soil binders. He mentioned that a sediment control captures sediment that an erosion control has failed to keep in place. Mr. Henninger added that the measures for sediment control are typically at the perimeter and include silt fencing, berms, sediment basins/traps, and fiber rolls. He presented examples of erosion and sediment controls. Mr. Henninger stated that the permit requires the implementation of both sediment and erosion controls. He mentioned that the suite of BMPs included in the SWPPP is to reflect site specific conditions. He stated that the permit language has been revised to keep sediment on site "to the extent practicable" instead of achieve "maximum pollutant removal."

Mr. Henninger mentioned that the area must have temporary or permanent stabilization within 14 days of the most recent land disturbance where construction activities have ceased. He stated that projects located within 50 feet of impaired or unique waters shall initiate stabilization practices within seven calendar days of inactivity. Mr. Henninger discussed the meaning of unique and impaired waters. He commented on stockpiles and noted that the former permit did not have this requirement. Mr. Henninger indicated that soil stockpiles are pollutant sources that create an overall increase in the surface area of exposed soils, along with severe slopes that contribute to increased sediment transfer. He added that sediment control BMPs are necessary to reduce potential increases in pollutant discharge and are required by the permit, except when stockpiles are actively being worked. Mr. Henninger mentioned that stockpiles must not be placed in streets, washes, sidewalks or other conveyances. He also discussed perimeter controls.

Mr. Henninger discussed SWPPP availability. He indicated that the SWPPP shall be on site whenever construction or support activities are actively underway and shall be locally available to the Department or any other federal, state or local authority having jurisdiction over stormwater discharges from the project. He mentioned that the Environmental Protection Agency (EPA) has prepared a resource for developing a SWPPP. Mr. Henninger mentioned inlet protection. He added that the final permit was revised to require inlet protection to all storm drains that discharge, or could discharge, to waters of the U.S. or to a local MS4 until all sources with potential for discharge to the inlet are stabilized.

Mr. Henninger discussed monitoring plans. He indicated that operators of projects within a 1/4 mile of unique or impaired waters shall prepare and implement a monitoring program. He indicated that the site-specific program is to include both visual and analytical monitoring. Mr. Henninger mentioned that monitoring plans shall be kept as part of the SWPPP as either an appendix or separate section. He added that this is not a new requirement; however, due to the nature and frequency of questions asked, detail has been added to this section to provide clarity.

Mr. Henninger stated that ADEQ has developed an online smart NOI system. He added that the NOI system is currently down but will be up again in three to four weeks. Mr. Henninger mentioned the information provided in the permit related to inspections. He stated that an example inspection form is provided in Appendix A of the permit. Mr. Henninger mentioned that ADEQ is currently working on a SWPPP checklist which will be the same checklist used internally to review SWPPPs. He added that the permit will encourage permittees to keep a checklist in front of the SWPPP completed with appropriate corresponding pages.

Mr. Williams commented on contractors using small kiddie pools as washout basins. He inquired if this option complies with the permit. Mr. Henninger responded that the method could meet the requirements; however, it depends on what happens to the material afterwards. Mr. Williams commented on there not being a discharge and the water evaporating to leave a solid or semisolid material. Mr. Henninger responded that would be okay if the rinsaide is not coming into contact with the ground. Ms. Novak indicated that the City of Phoenix has a facility on Indian Lands and inquired if ADEQ has any jurisdiction in this location with regard to the permit. Mr. Henninger responded that ADEQ does not have jurisdiction on Indian Country. He added that Indian County is permitted through EPA.

7. Call for Future Agenda Items

Acting Chair Iwanski asked for suggestions on any future agenda items. With no further comments, he thanked the Committee for participating and called for adjournment of the meeting at 3:55 p.m.

Janet Napolitano
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

1110 West Washington Street • Phoenix, Arizona 85007
(602) 771-2300 • www.azdeq.gov

Stephen A. Owens
Director

May 13, 2008

Lindy Bauer, Environmental Director
Maricopa Association of Governments
302 North 1st Avenue, Suite 300
Phoenix, AZ 85003

Re: The Preserve at Goldfield Ranch Section 208 Review

Dear Ms. Bauer:

As you know, the Arizona Department of Environmental Quality (ADEQ) administers the Clean Water Act Section 208 water quality management planning process in Arizona. Through the Governor's designation, Councils of Government, such as the Maricopa Association of Government (MAG), provide local review of proposed municipal wastewater projects to determine consistency with the local and state water quality management general plan. ADEQ has approved MAG's October 2002 Water Quality Management Plan, which outlines the substantive and procedural requirements for MAG and ADEQ approval of a municipal wastewater project.

We understand that the MAG Regional Council may act on the Section 208 Small Plant Process review of The Preserve at Goldfield Ranch (the project) at its meeting on May 28, 2008. We have been contacted by both the Salt River Pima-Maricopa Indian Community and the Fort McDowell Yavapai Nation regarding their concerns about the proposed project. We have learned that MAG's Water Quality Advisory Committee, on March 20, and MAG's Management Committee, on April 9, have passed the project despite letters of concern issued in December 2007 by both communities and presentations by both communities at the March 20 and April 9 MAG subcommittee meetings in which the communities raised a number of concerns about the project that have not been addressed to their satisfaction.

MAG's approved October 2002 Water Quality Management Plan states: "Projects within three miles of a Municipal Small Plant Planning Area would be reviewed and commented on by the affected City or Town. Projects with major problems to the City or Town which could not be resolved, would not receive compliance from ADEQ." Both tribal communities have MAG-designated Municipal Planning Areas within three miles of the project. Therefore, it is ADEQ's expectation that the water quality management related concerns of the two tribal communities will be resolved by the project proponent and the project sponsor (Maricopa County) before the Regional Council approves the project and submits it to ADEQ. In accordance with our rules, ADEQ will not process the Aquifer Protection Permit for the project until such objections are

resolved and approved by the Regional Council. *See* Arizona Administrative Code R18-9-A201(B)(6).

Please share this information with Regional Council members. If you have any questions, please feel free to contact me at (602) 771-2303, or Water Quality Division Deputy Director, Linda Taunt, at (602) 771-4416.

Sincerely,

Joan Card

Joan Card, Director
Water Quality Division

cc Brian Davidson, ADEQ Tribal Liaison

SRP-MIC

Goldfield Ranch Small Plant Review Technical Support

Executive Summary

Final Report: May 15, 2008

Prepared for:

Salt River Pima-Maricopa Indian Community

Prepared by:

HDR Engineering, Inc

3200 E Camelback Road, Suite 350

Phoenix, Arizona 85018

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1.0 Executive Summary

1.1 Purpose

HDR Engineering, Inc. (HDR) was hired by the Salt River Pima-Maricopa Indian Community (SRP-MIC) to provide third party technical review services of the Small Plant Review and Approval request to the Maricopa Association of Governments (MAG) for the proposed water reclamation facility associated with The Preserve at Goldfield Ranch.

1.2 Summary Assessment

It is HDR's assessment that wastewater collection and treatment for the entire area (The Preserve and Goldfield Ranch) is in the best interest of Maricopa County and all users and beneficiaries of the Verde River. The proposed plant should not be considered in a similar manner as other Small Plants that have been approved that are serving relatively flat areas away from perennial streams. The potential for surface water impairment with raw sewage is much higher than with other plants because of the steep topography and proximity of the plant to the Verde River. It is our judgment that the proposed plan for on-site treatment (septic systems) for parcels C and D is not in the best interest of the protection of regional water quality. Available hydrogeologic information is inconclusive regarding an impeding layer that would prevent injected reclaimed water from reaching the subflow of the Verde River. If the injected reclaimed water reached the subflow of the Verde River, it would need to meet surface water quality standards for the respective reach of the river. Finally, the proposed collection system, treatment plant, reclaimed water distribution system, and management of excess reclaimed water by injection will be expensive to operate, maintain, repair, and replace for a County Improvement District (CID) that will rely heavily on approximately 1,000 single-family home sites.

The MAG 208 *Water Quality Management Plan* is the County's first defense against degradation of water quality. It is entirely appropriate and expected that

MAG would apply increased scrutiny to a proposed plant that will be owned and operated by a CID, is very close to a valuable perennial stream, and for which there is limited ability to cost-effectively mitigate service failures to prevent raw sewage from entering the river. At a minimum, according to the intent of the MAG 208 planning process, the plant should be planned and sized to treat sewage from the entire area, and further assessment regarding the categorization of the plant (based on the potential for Verde River water quality impacts) should be made before MAG approves the plant for amendment into the *Water Quality Management Plan.* Regional wastewater collection and treatment is the best approach to protecting water quality, and more consideration needs to be given to the risks posed by the location of the proposed plant and the nature of the wastewater flow and quality characteristics it may be processing on startup or in the future.

1.3 Discussion

For Small Plants outside of Municipal Planning Areas (MPAs) to be approved for inclusion in the MAG 208 *Water Quality Management Plan* and construction, the following general criteria must be met:

- The Applicant must obtain the review and comment of any municipality whose Small Plant planning Area is within 3 miles of the proposed plant location or service area.
- The proposed plant must not adversely affect the operation or financial structure of existing or proposed wastewater treatment plants.
- The proposed plant must be consistent with State and County regulations and other requirements.
- The proposed plant must otherwise be consistent with the MAG 208 Plan.
- The proposed plant must be either evaluated and approved or it must be modified by the Maricopa County Environmental Services Department.

A number of specific criteria for the assessment of feasibility for a Small Plant outside of an MPA also exist. This report provides a detailed review of the

Applicant's response to each criterion, as well as a review of the SRP-MIC's concerns, and HDR's assessment of Applicant's compliance with the MAG 208 review criteria. As of May 15, 2008, five interrelated issues relevant to the protection of water quality remain unresolved by the Applicant, and, therefore, render the proposed plant inconsistent with the MAG 208 *Water Quality Management Plan*:

- Plant location and local features
- Service area
- On-site treatment
- Potential surface water quality impacts from injection
- Owner/Operator financial capability

1.3.1 Plant Location and Local Features

The unique features of the proposed plant's location relative to the Verde River, the surrounding topography, and the increased risk it poses to surface water quality standards established for the protection of wildlife and humans have not been adequately considered. While the proposed plant will have redundant power supply and on-site retention, a service failure of it or of the associated sewage lift stations throughout the community (which are not proposed to have redundant power or retention) would result in a sewage overflow that could make its way to the Verde River. The proposed plant location is 2.5 miles and 210 feet in elevation from the Verde River. At build-out capacity, unimpeded wastewater overflows from the proposed plant could reach the river within 6 to 18 hours of plant failure.

1.3.2 Service Area

The intent of the MAG 208 review process, as set forth by Section 208 of the Clean Water Act (CWA), is to protect water quality through a regional planning process. The MAG 208 process has also incorporated Growing Smarter Legislation principles to strengthen the regional planning role of MAG for multiple benefits to current and future generations of inhabitants. The *Water*

Quality Management Plan and related amendment process for Small Plants is intended to prevent the "uncontrolled proliferation of Small Plants that could cause problems in the future." The proposed plant will serve a limited area within a larger and completely enveloped county island containing existing development with septic systems and plans for additional development (including the Grayhawk proposed development west of Goldfield Ranch) that will require or could benefit from sewer collection and treatment. Not providing sewer service to the entire area will encourage the proliferation of Small Plants and septic systems in the area that increase the risk to regional water quality.

1.3.3 On-Site Treatment

The proposed plant will receive wastewater from residential and commercial properties. The Applicant has indicated that at least one commercial facility, a resort/spa, may be included. Land along State Route 87 will be highly desirable for commercial facilities, because these are the last opportunity for such facilities for travelers leaving the urban core and the first opportunity for those entering the urban core, along the highway. The Applicant currently proposes that parcels C and D, which will be the most desirable for commercial facilities, will be served by septic systems (on-site treatment). The Applicant states an intention to develop parcels C and D with single-family home sites in excess of 1 acre. However, Special Use Permits can be obtained from Maricopa County and can be used to respond to consumer demand, to effectively change the zoning and land use from residential to commercial. Such changes are not subject to review by the MAG 208 process. Regardless of what type of development occurs along State Route 87 on parcels C and D, use of septic systems as the on-site wastewater treatment technology is not a sound plan for protection of regional water quality. However, inclusion of significant commercial wastewater flows into the proposed plant will likely cause wide fluctuations in influent wastewater quality that may challenge the treatment capabilities of the proposed biologically active plant.

1.3.4 Potential Surface Water Quality Impacts from Injection

The proposed water reclamation facility at The Preserve at Goldfield Ranch initially appears to meet the criteria for a Small Plant (less than 2.0 MGD and not requiring a CWA discharge permit) that is outside of an MPA but within 3 miles of cities or towns that have Small Plant planning areas. In Arizona, the CWA discharge permit is called an Arizona Pollutant Discharge Elimination System permit, or "AZPDES" permit, and is used to maintain and avoid degradation of surface water quality.

Management of the unusable portion of the proposed plant's reclaimed water through injection wells will require compliance with surface water quality standards if it is demonstrated that the injected water mixes with the subflow of the Verde River. That is, production of Class A+ reclaimed water will not be sufficient, if this is the case. Review of hydrogeologic data from the Arizona Department of Water Resources (ADWR) and Salt River Project (SRP) indicates that the existence of a continuous clay layer that would prevent or retard injected Class A+ reclaimed water from entering the Verde River is inconclusive. Further, the analysis of the 72-hour aquifer test conducted in 1985 at The Preserve at Goldfield Ranch reveals a response more typical of a leaky confined aquifer or proximity of a recharge boundary, not of a confined aquifer. In this circumstance, ADEQ will likely require compliance with surface water quality criteria for the reach of the Verde River into which the discharge would be received. At ADEQ's discretion, these criteria could become part of the Applicant's Aquifer Protection Permit (APP), or could be implemented through a separate AZPDES permit. In either case, the potential exists for surface water quality standards (derived from the CWA) to be included in a permit. Therefore, a determination needs to be made at this point in the planning process if the Goldfield WRF meets the MAG 208 small plant designation before an application for amendment to the MAG 208 *Water Quality Management Plan* can be made.

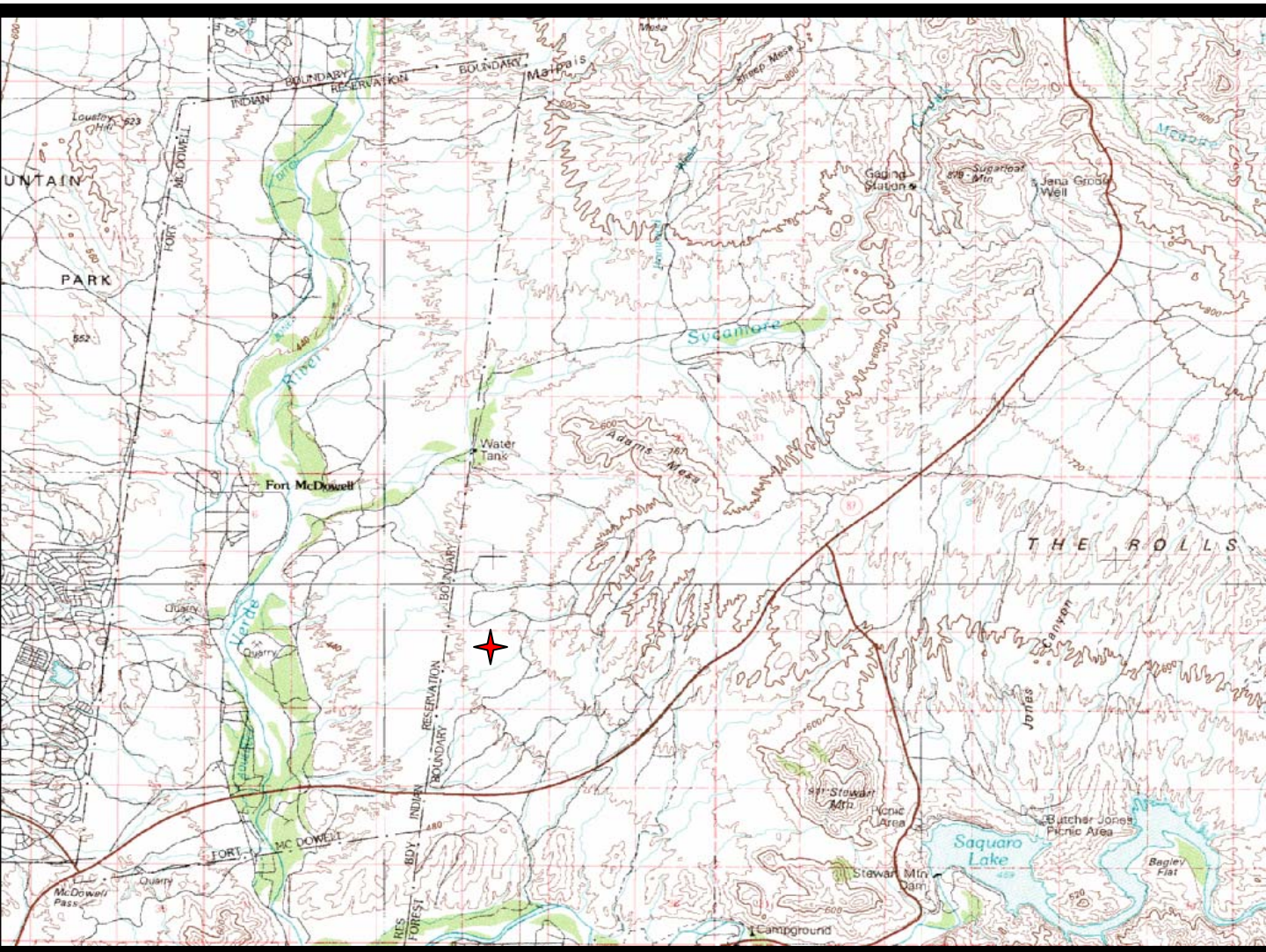
1.3.5 Owner/Operator Financial Capability

While the Applicant has demonstrated financial capability to build the plant, the operation, maintenance, and repair and replacement of infrastructure and appurtenances for the collection system, plant, and the distribution (reuse) and management (injection and recovery) system of reclaimed water will be relatively expensive for a CID made up largely of residential customers (approximately 1,000 service connections) to continuously fund. For example, if an aquifer storage and recovery well (as is implied by Applicant's Figure 5) were to fail and need to be replaced, it would cost the CID approximately $1 million to replace it. Based on historical performance of wells in the Maricopa County area, injection wells need to be rehabilitated every 3 to 5 years at an average cost of $100,000. Also, the increased risk to surface water quality translates to an increased risk of violation and fines imposed on the CID. The Applicant has stated that the developer will supplement the financial security of the CID, but does not indicate for how long. Regardless, this issue does not appear to be adequately addressed by the Applicant, and there appears to be the potential for a significant financial burden to the future CID.

1.4 Conclusion

While the Applicant has successfully addressed some of the issues pertinent to the MAG 208 process, there are key components in the application that have not been adequately addressed. Consequently, the application is inconsistent with the MAG 208 *Water Quality Management Plan.*

Goldfield Ranch Small Plant Review
Technical Support
Final Report
May 15, 2008



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SRP-MIC

Goldfield Ranch Small Plant Review Technical Support

Final Report: May 15, 2008

Prepared for:

Salt River Pima-Maricopa Indian Community

Expires 3/31/2010

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Appendix A – Hydrologic Data Evaluation

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ACRONYMS AND ABBREVIATIONS

AAC	Arizona Administrative Code
ACC	Arizona Corporation Commission
ADEQ	Arizona Department of Environmental Quality
ADWR	Arizona Department of Water Resources
APP	Aquifer Protection Permit
ASR	Aquifer Storage and Recovery
AZPDES	Arizona Pollutant Discharge Elimination System
CID	County Improvement District
CWA	Clean Water Act
FMYN	Fort McDowell Yavapai Nation
MAG	Maricopa Association of Governments
MCESD	Maricopa County Environmental Services Department
MPA	Municipal Planning Area
NPDES	National Pollutant Discharge Elimination System
SRP	Salt River Project
SRPMIC	Salt River Pima Maricopa Indian Community

1.0 Introduction

The Salt River Pima-Maricopa Indian Community (SRP-MIC) has identified a number of concerns relating to the proposed Water Reclamation Facility (WRF) for the planned development, entitled The Preserve at Goldfield Ranch (Applicant). SRP-MIC has contracted with HDR Engineering, Inc. (HDR), to provide professional engineering and hydrogeological consulting services to provide third-party review of its concerns. HDR subcontracted with HydroSystems, Inc. (HSI), for the hydrogeologic services.

1.1 Purpose

The purpose of this report is to:

- Provide third-party technical review of the Applicant's adherence to the MAG 208 *Water Quality Management Plan* amendment criteria
- Evaluate the Applicant's response to concerns raised by the SRP-MIC
- Identify and document any additional technical concerns with regard to the Applicant's MAG 208 amendment request
- Summarize findings and draw conclusions regarding Applicant's compliance with the MAG 208 *Water Quality Management Plan* amendment criteria

1.2 Background

1.2.1 Section 208 of the Clean Water Act (CWA)

The MAG 208 process is a result of recommendations in Section 208 of the CWA. The CWA, which was passed in 1972, has been one of the most important pieces of environmental legislation for the protection of water quality in nation's rivers, lakes, estuaries, and wetlands. Protecting the quality of the nation's surface water involves regulating wastewater treatment and discharges and appropriate regional planning to wastewater treatment. Section 208 of the CWA encourages the development and implementation of areawide waste treatment management plans.

Section 208 stipulates that the regional waste water treatment management plans identify the anticipated municipal and industrial waste treatment needs in the area for a 20-year period and the treatment works necessary to meet those needs. The plan is to include processes to control the disposal of pollutants to protect ground and surface water quality. It authorizes a regulatory program to:

- Implement waste treatment management requirements of section 201(c)
- Regulate location, modification, and construction of any facilities which may result in any discharge in such area
- Ensure that industrial or commercial waste discharged into any treatment works meets applicable pretreatment requirements

1.3 MAG 208 Water Quality Management Plan

1.3.1 Structure and Purpose

The MAG 208 Water Quality Management Plan was first adopted in 1979. Now in effect is the second revision, adopted in 2002. The Plan was developed in response to the CWA Section 208 requirement that each state operate a continuing areawide waste treatment management planning process. For Maricopa County, the Maricopa Association of Governments (MAG) has been designated as the areawide water quality management planning agency. The planning process is a mechanism to identify specific areawide waste treatment and water quality management.

The Plan has two major elements: the Point Source Plan and the Non-Point Source Plan. The Point Source Plan is intended to "identify the preferred wastewater collection and treatment, and effluent reuse or disposal systems for the study area." The Non-Point Source Plan was implemented in an effort to control all pollutant discharges that do not originate from a specific single location.

The MAG 208 planning process incorporates the efforts of several agencies. The United States Environmental Protection Agency (USEPA) is charged with

overseeing the program to ensure the requirements and goals of Section 208 of the CWA. The Arizona Department of Environmental Quality (ADEQ) reviews and enforces the water quality standards. At the local level, cities, towns and tribal communities are responsible for planning and providing necessary collection and treatment facilities. The Maricopa County Environmental Services Department (MCESD) contributes to the process by issuing approvals to construct and approvals to operate wastewater treatment facilities located in Maricopa County.

The current *Water Quality Management Plan* acknowledges Arizona's Growing Smarter legislation as foundational for integrated planning, in concert with the MAG 208 process.

1.4 Growing Smarter Legislation

Recent legislation in Arizona has established roles for local and state government in planning and managing growth of urban areas. The Growing Smarter Act of 1998 (HB 2361), the Growing Smarter Plus Act (Senate Bill 1001), and the Growing Smarter Oversight Council Bill (HB 2601) affect how MPA (MPA) extend infrastructure to new development.

The recent bills amend existing planning and zoning legislation for Arizona. In general, the Growing Smarter Act requires municipalities and counties to adopt 10-year general plans to guide future development. The Arizona State Land Department is also required to create plans to coordinate with municipal and county plans and consider open space planning. Any general plan updates must be adopted by a planning commission, council, and a majority vote of registered voters. In addition a water resource element must be included in the plan to consider the physical and legal availability of water supplies for the projected demand over the planning horizon.

The Growing Smarter Legislation has been critical in facilitating planning coordination among the municipalities, counties, and State Land Department. The water resource element attempts to address planning needs to meet the

growing population's water demands.

1.5 Amendment Approval Process

An approval process was developed to avoid revising the MAG 208 Plan each time a new plant was proposed and accepted. This process applies to any plant not already identified in the Point Source Plan of the MAG 208 Plan. The Point Source Plan was created to compile the preferred wastewater collection and treatment system for Maricopa County through the year 2020.

Plants are differentiated by size and permit requirements. A Small Plant is defined as having an ultimate capacity less than 2.0 million gallons per day (MGD) and not requiring National Pollutant Discharge Elimination System (NPDES) permit or, in Arizona's case, the Arizona Pollutant Discharge Elimination System (AZPDES) permit.

The Small Plant approval process is intended to avoid "an uncontrolled proliferation of Small Plants that could cause problems in the future." The approval process is described in Section 4.5 of the MAG 208 *Water Quality Management Plan*. The approval processes are similar for Small Plants proposed within or outside an MPA, with variation in the evaluation criteria. The MAG 208 approval process for a Small Plant outside an MPA is described below:

- An engineering report is submitted by the applicant to Maricopa County and any Cities (including tribal communities) whose Municipal Small Plant Planning Areas are within 3 miles of the proposed plant's service area. The information contained in the report will be evaluated based on the criteria in the MAG 208 Small Plant Approval Process, as summarized in Tables 1 and 2 of this report.
- The involved Cities send a letter of their recommendations to Maricopa County.

- Maricopa County incorporates the Cities' concerns in a letter and summary of the proposal to MAG with its determination regarding the proposal's acceptability.
- The MAG Water Quality Advisory Committee evaluates the proposal for overall conformance to the MAG 208 Plan to ensure the Small Plant Process is followed and to ensure all regional impacts are addressed. Its recommendations are presented to the MAG Management Committee. The MAG Management Committee reviews the proposal and presents a recommendation to the Regional Council. Once the Regional Council approves the amendment, a letter of 208 compliance is submitted to Arizona Department of Environmental Quality (ADEQ).
- ADEQ reviews the MAG submittal and sends a letter to MCESD indicating 208 Plan compliance.
- After the receipt of a 208 Plan compliance approval letter from ADEQ, MCESD reviews the plans and specifications based on Arizona Department of Health Services Engineering Bulletin #11. MCESD issues a permit to construct when its requirements for approval have been met.

Of particular importance and interest to SRP-MIC is that the MAG 208 *Water Quality Management Plan* states, "projects with major problems to the City or Town which could not be resolved, would not receive compliance from ADEQ."

1.6 Recent Small Plant Amendment Approvals

1.6.1 The Estates at Lakeside

The Estates at Lakeside is located in the City of Peoria's MPA, and is now owned and operated by the City of Peoria. This Small Plant was approved by the MAG Regional Council in March 2006. The Estates at Lakeside is an activated sludge wastewater treatment plant with an ultimate capacity of 120,000 gpd (ESCA, 2006). This plant will be constructed in two phases to serve the Estates at Lakeside subdivision; each phase has a 60,000 gpd design flow. The treated

effluent will be disposed of by deep-well injection into the aquifer. Hydrogeologic analysis was provided to Arizona Department of Water Resources (ADWR) and considerations presented in the Aquifer Protection Permit (APP) application are also included in the submittal. The plant is near the Agua Fria River below Waddell Dam (forming Lake Pleasant), which is an ephemeral stream when releases from Waddell Dam allow it to flow. This reach of the Agua Fria River is designated by ADEQ as appropriate for partial body contact, but not as a domestic water source.

1.6.2 The Ruth Fisher School

The Ruth Fisher School is located in Tonopah but outside of any MPA in Maricopa County and has a Small Plant for sewage treatment. This Small Plant originally produced 15,000 gpd and Class B reclaimed water. The application for expansion to 42,000 gpd was approved by the MAG Regional Council in January 2005 (Fluid Solutions 2004). The expansion included upgrading the treatment technology for production of Class A+ quality reclaimed water. The water will be reused for irrigation and landscaping at the school with any remaining effluent recharged into the aquifer using infiltration chambers. A design concept report for the proposed treatment plant is included in the submittal to MAG. There is very little slope to the land in the area, and the plant is several miles from the closest surface water, the Gila River. Additionally, the plant was not within 3 miles of any other City's MPA.

HDR compared the previous amendment approvals of these two recent Small Plants to the Goldfield Preserve application. In general, additional information was submitted in support of the previous applications including design reports, APP applications, and more specific and direct responses to the technical evaluation criteria set forth by MAG. Although, not required by the Small Plant Process, this additional information may have been helpful in answering specific questions about the proposed reclamation facility.

2.0 Compliance of Applicant's Request to MAG 208 Amendment Requirements

To facilitate its review, HDR developed tables that describe the MAG 208 amendment general and specific criteria, the Applicant's response to the criteria, and HDR's assessment of the Applicant's compliance with the criteria. Table 1 addresses the general criteria. Table 2 addresses the specific criteria.

Table 1: General Assessment for Compliance of the Goldfield Water Reclamation Application to MAG 208 Criteria

	MAG 208 Criteria	Addressed by Applicant	HDR Assessment
1	Have the review and comment of any municipality whose Small Plant Planning Area is within three miles of the proposed plant location or service area.	Yes	The Applicant has received comment from municipalities with MPA within 3 miles of the proposed site. However, many of the comments and questions are still unresolved.
2	Not adversely affect the operation or financial structure of existing or proposed wastewater treatment plants.	No	The application does not address the impact to other existing wastewater treatment plants.
3	Be consistent with State and County regulations and other requirements.	Yes	The application includes a number of appropriate permits that will be required to operate the WRF.
4	Be otherwise consistent with the MAG 208 Plan.	No	The Goldfield WRF is not consistent with the MAG 208 Plan since it does not take into account private lands that could be served by the plant. It also does not take into account the unique features of the location and potential impacts to the Verde River.
5	Be evaluated and approved, or modified by MCESD.	Yes	MCESD has commented "no conflict."

Table 2: Specific Assessment of Compliance with MAG 208 Small Plant Approval Amendment

		MAG 208 Criteria	Addressed by Applicant	HDR Assessment
Technical Criteria				
1	**Why is a small plant desired?**		Yes	A Small Plant is more desirable in this instance, but limiting the Small Plant service area is inconsistent with the intent of the MAG 208 process.
	a	Depth to groundwater less than ___ ft.	No	Not specifically addressed in the body of the application. However, the hydrogeology report includes a figure that identifies water levels for wells within the project area.
	b	Soil Limitations prevent use of septic tanks	No	Not addressed; however, soil limitations do not appear to prevent the use of septic tanks but from a water quality standpoint a Small Plant is more desirable.
	c	Potential for reuse or water conservation	Yes	Criteria have been adequately addressed.
	d	Lot size one acre or less	Yes	Some lot sizes are greater than 1 acre.
	e	Area not planned for regional service for ___ years	Yes	Application states that the WRF substitutes for a WWTP. Limited discussion of service area of WWTP included in 1995 area plan.
	f	Density of projected population	Yes	Does not take into account the potential growth for the remaining private land.
	g	Will serve industrial or commercial area	No	WRF receives domestic and commercial wastewater.
2	**What is the anticipated quality of the wastewater?**		Yes	Does not address the quality of wastewater from the commercial uses.
	a	Domestic	Yes	Adequately addressed for service area.
	b	Commercial and/or Industrial	No	Not addressed.
	c	If commercial and/or industrial wastes are anticipated, what provisions are being taken to ensure no toxic substances will be discharged?	No	Not addressed.

Table 2: Specific Assessment of Compliance with MAG 208 Small Plant Approval Amendment (Continued)

MAG 208 Criteria			Addressed by Applicant	HDR Assessment
3	**How and why was a small plant design and capacity selected?**		Yes	Discussion of the design and capacity is addressed but does not incorporate all private lands.
	a	What criteria were used?	Yes	Adequately addressed.
	b	What alternatives were considered?	Yes	Adequately addressed.
	c	What are benefits, problems of alternatives?	Yes	Adequately addressed.
	d	Will there be problems meeting State or County regulations?	Yes	Does not consider possibility of AZPDES permit or surface quality requirements.
	e	What sludge management options were considered?	Yes	Limited options were discussed. Who will be hauling the sludge? What plant will be accepting the sludge?
Planning Criteria				
1	**Is proposed plan compatible with County adopted master plans, guidelines, etc., for the area?**		Yes	The application addresses this by considering the 1995 adopted MC plan. However, the WRF does not include adjacent private property for service.
	a	What plans apply?	Yes	Adequately addressed.
	b	What guidelines or policies apply?	Yes	Misses the intent of the CWA Section 208, nonproliferation of small wastewater plants and regional planning.
2	**Can the proposed plant be expanded to serve growing population?**		Yes	Applicant addresses this issue by saying "limited." There is sufficient land to increase the capacity. Use of membrane bioreactor could increase the capacity with the same land area.
	a	What population is projected for the service area?	Yes	Applicant addresses this issue but does not take into account the larger potential service area of the private lands. MC plan indicates population could range between 3,500 and 7,000 at build-out (Goldfield Area Plan, 2007).
	b	What certain areas lend themselves, topographically or hydrologically, by planned use or density to being included in the service area?	Yes	Not adequately addressed. See 2a.
3	**Will proposed plant adversely impact existing or approved nearby land uses?**		No	Not addressed sufficiently.
	a	What are land uses within ___ miles?	Yes	Limited discussion.
	b	What is zoning for surrounding area?	Yes	Adequately addressed.
	c	What are reactions of nearby landowners to proposed facility?	Yes	Not adequately addressed.

Table 2: Specific Assessment of Compliance with MAG 208 Small Plant Approval Amendment (Continued)

MAG 208 Criteria			Addressed by Applicant	HDR Assessment
4	**Will there be a net water saving from effluent reuse?**		Yes	Adequately addressed.
	a	How will effluent be disposed of?	Yes	There is not sufficient information to state that the injection wells will not affect the Verde River and the nearby wells.
	b	What is the estimated water saving?	Yes	Adequately addressed.
5	**Do nearby existing or proposed land uses indicate a need for larger capacity sewage plant than that proposed?**		Yes	Not adequately addressed. See 2a.
	a	Should nearby areas be sewered or otherwise join the proposed plant for water quality or economic reasons?	Yes	Not adequately addressed. Plan should include for plant expansion and service connection for the entire county island at build-out.
	b	Do these areas wish to join the proposed plant?	No	Have surrounding homeowners been made aware of the possibliity of connecting to a plant? What public relations activities have been conducted to inform property owners of the plant?
Development Criteria				
1	Who will fund the construction?		Yes	Adequately addressed.
2	Who will fund operation and maintenance costs?		Yes	How will a CID afford the O&M on this complex system?
3	Is there adequate financial security to assure continual and proper operation and maintenance?		No	This is addressed as financial security of Goldfield Preserve Development LLC but not of the CID that will be ultimately maintaing the system.
4	Who will operate and maintain the plant and system?		Yes	References provided for other WRFs, but operator does not show experience with injection wells. Operator resides 3 hrs from the proposed site and would be required to inspect the facility daily.
5	What are the anticipated capital and operation and maintenance costs?		Yes	Not appropriately sized for area needs.Lack of appropriate O&M costs. What will be the real costs?

3.0 SRP-MIC Concerns Regarding Applicant's Amendment Request

3.1 Clay Layer

The hydrogeology at the Goldfield site consists of the Alluvial Floodplain Aquifer, which overlays the Pemberton Ranch Formation and the Needle Rock Formation (regional aquifer).

> The Pemberton Ranch Formation composed predominantly of siltstone, claystone and fine-grained sandstone also contains minor coarse-grained sandstone and conglomerate is considered an aquiclude/aquitard confining groundwater in the predominantly subjacent Needle Rock Formation…The extension and thickness of the Pemberton Ranch Formation is important for determining the possible hydraulic connection of the Alluvial Floodplain Aquifer and the Needle Rock Formation. If the fine grained unit is absent in the mountain front edges of the basin, as is frequent in other southern Arizona basins, direct recharge from runoff can take place directly to the regional aquifer (HSI 2008, p.5).

Three wells located on the northwest corner of Parcel A of the Preserve at Goldfield Ranch intersect 250 feet of silty clay at a 400-foot depth. The figures in the Applicant's Hydrological Study (Southwest Ground-water Consultants 2006) estimate the Pemberton Ranch Formation across the entire property. The Applicant assumes that the aquifer to receive the reclaimed injected water is confined and will not impact the nearby Verde River.

However, HSI review of numerous drillers' logs from The Preserve at Goldfield Ranch and adjacent areas concludes there is "insufficient good-quality information to map with sufficient reliability the extent of the Pemberton Ranch Formation" (HSI 2008) as the Applicant has done. In addition, analysis of the 72-hour aquifer test of The Preserve at Goldfield Ranch shows a response more typical of a leaky confined aquifer or proximity of a recharge boundary, which is contrast with the Applicant's assumption. Others such as Salt River Project (SRP) believe there is hydrologic connectivity between the two aquifers at the proposed site (SRP letter, April 8, 2008). Because of these conclusions,

there is sufficient evidence to require additional investigation. See Appendix A – Hydrologic Data Evaluation for recommended subsurface investigation.

3.2 Treatment Levels

The developer claims the treatment technology proposed for the plant will provide treatment to below ADEQ standards for four constituents. Treating to a water quality level that is lower than these ADEQ standards is what is expected. Of material importance is whether the proposed technology can be shown to produce an effluent quality that meets the water quality criteria for the intended reuse or discharge. For the purpose of beneficial reuse, the developer has considered four variations of activated sludge processes to produce Arizona Class A+ reclaimed water. However, it cannot be ascertained from the Applicant's text or conceptual site plan whether a denitrification step is to be included. The "+" for Arizona Class A+ and Class B+ reclaimed water is in reference to water that contains less than 10mg/L nitrate as nitrogen. This notwithstanding, it is common practice to include an anoxic zone or other treatment process in association with the proposed treatment processes to achieve the water quality standards of Class A+ reclaimed water.

The water quality standards for Class A+ water are as follows (AAC, 2003):

1. The turbidity of Class A+ reclaimed water at a point in the wastewater treatment process after filtration and immediately before disinfection complies with the following:
   a. The 24-hour average turbidity of filtered effluent is two NTUs or less, and
   b. The turbidity of filtered effluent does not exceed five NTUs at any time.
2. Class A+ reclaimed water meets the following criteria after disinfection treatment and before discharge to a reclaimed water distribution system:
   a. There are no detectable fecal coliform organisms in four of the last seven daily reclaimed water samples taken, and
   b. The single sample maximum concentration of fecal coliform organisms in a reclaimed water sample is less than 23 / 100 ml.

c. If alternative treatment processes or alternative turbidity criteria are used, or reclaimed water is blended with other water to produce Class A+ reclaimed water under subsection (C), there are no detectable enteric virus in four of the last seven monthly reclaimed water samples taken.

3. The 5-sample geometric mean concentration of total nitrogen in a reclaimed water sample is less than 10 mg / L.

HDR is confident the proposed treatment technologies, with the addition of nitrogen removal technology, are capable of producing Class A+ reclaimed water. If the Applicant intends to produce Class A+ reclaimed water quality, ADEQ will require the addition of nitrogen removal technology for the APP. The following is a summary of the treatment processes considered by the Applicant:

3.2.1 Sequencing Batch Reactors

The batch process means all biological treatment occurs in a single tank. Sequencing batch reactors are two or more reactor tanks operated in parallel or an equalization tank and a reactor tank. This process allows for several types of systems: continuous influent/time based, noncontinuous influent/time based, volume based, intermittent cycle system using jet aeration, and various other modifications. Sequencing batch reactor plants are typically manufactured to handle flow rates of 0.01 to 0.2 MGD, and can be installed in parallel modules. This type of process has a large operational flexibility, including the ability to control substrate tension that allows for optimization of treatment efficiency, control over nitrogen removal, filamentous organisms, and overall stability. Other advantages include few operation and maintenance problems, smaller footprints than other types of plant, capability of being manned part-time from a remote location, no production of bulk sludge, and the system allowance for automatic and positive control of mixed liquor suspended solids concentration and solids retention time through sludge wasting. Disadvantages include difficulty in adjusting cycle times for smaller communities, possible requirement for

postequalization if more treatment is needed, need for frequent disposal, and high energy consumption (EPA 2000).

3.2.2 Oxidation Ditches

An oxidation ditch is typically a channel configuration within a circular, oval, or horseshoe-shaped basin. Inside the ditch the wastewater is aerated with surface or submersible aerators. Aerators must provide sufficient oxygen and mixing to ensure contact between organisms and their food supply. Oxidation ditches are used for flow rates between 0.01 and 0.5 MGD. This type of plant handles typical domestic waste well, uses a moderate amount of energy, has inexpensive operation and maintenance costs, has low operational needs, can operate flexibly operating with or without a clarifier, consistently provides high quality effluent (TSS, BOD, ammonia), and has a low sludge yield. However, these plants can be noisy and can produce odors when not operating properly, are unable to treat highly toxic wastes, require a large footprint, and exhibit limited flexibility responding to changing effluent regulations. Nitrogen removal can be performed within the ditch by constructing a separate anoxic zone, but doing so reduces treatment capacity. It is best to perform nitrogen removal through a separate reactor (EPA 2000).

3.2.3 Extended Aeration Plants

The extended aeration process is a biological treatment for the removal of biodegradable organic waste. Oxygen is required to sustain the aerobic biological process; this can be achieved through mechanical or diffused aeration, which will also provide the mixing action to keep microbial organisms in contact with dissolved organics. For this process to be continually effective, essential nutrients must be available to promote biological growth and the pH must be controlled. These plants are typically used for flow rates 0.1 below MGD. They are easy to operate, easy to install, odor free, have a low sludge yield, and are often better at handling organic loading and flow fluctuations. Extended aeration plants do not perform denitrification or phosphorus removal without additional processes, have

limited flexibility to adapt to changing effluent requirements, require more energy, and require a large footprint (EPA 2000).

3.2.4 Complete Mix

The Complete mix activated sludge process is an application in a continuous-flow stirred-tank reactor. The aeration tank has several points where settled wastewater and recycled activated sludge are introduced. The assumption in the process is that the mixed liquor suspended solids concentration and oxygen demand are uniform throughout the entire tank. This type of process dilutes shock loads that may come into the system from industrial wastes. The complete mix system is simple to operate. The system disadvantage is that there are low organic substrate concentrations encourage growth of filamentous bacteria, causing sludge bulking problems. A separate reactor would be needed to provide nitrogen reduction (Metcalf & Eddy 2003).

As indicated in Section 4, meeting Class A+ reclaimed water quality standards may not be sufficient for this plant. If the injected reclaimed water mixes with the subflow of the Verde River, ADEQ will likely require the Applicant to ensure the surface water quality standards for the respective reach of the Verde River are not exceeded by this practice. There is insufficient evidence or technical information about the hydrogeology and geochemistry of the area to ascertain whether water meeting Class A+ reclaimed water standards would be sufficient to also meet surface water quality standards at the point where injected water would adversely affect the Verde River water quality.

3.3 Regional Planning

Regional planning is the purpose of the MAG 208 process. The MAG 208 Small Plant approval process is specifically designed to eliminate a proliferation of small treatment plants. The Goldfield WRF is planned to serve parcels A and B of the Goldfield subdivision, including a small commercial area. There is intent to develop parcels C and D on the southeast side of Highway 87, which would be servce by septic systems. A

nearby developer has also submitted to Maricopa County a notification of intent to develop a subdivision (known as "Grayhawk") of one to two units per acre, necessitating a sewer system (Grayhawk Development, 2007). There are also many developed lots in the area currently using septic systems.

To best use the MAG 208 planning process, the following issues should be reconsidered: the feasibility of accommodating the entire Goldfield area, the private lots, and the Grayhawk development. This is particularly important given that The Preserve at Goldfield Ranch is completely enveloped by the Tonto National Forest on three sides, and the FMYN on the west side. The proposed plant represents the best opportunity for maintaining and protecting water quality in the entire area.

From a consumer demand standpoint, it will be attractive for commercial development to occur along Highway 87, because this is the last remaining substantial stretch of land that could be used for commercial services before entering National Forest land, or on re-entry to the urban core. Consumer demand for commercial services may significantly influence land use associated with parcels C and D, and, therefore, the character and flow of wastewater to the proposed treatment plant. While the intention of the Applicant is that parcels C and D will be developed for single-family home sites, consumer demand can be accommodated through pursuit and acquisition of Special Use Permits from Maricopa County that would allow for a change of zoning to a commercial category. This process would need to be pursued outside of the MAG 208 review process.

3.4 Small Plant Operator and Plant Failures

The *Water Quality Management Plan* for The Preserve at Goldfield Ranch indicates that the wastewater treatment facility will be a 0.40-MGD reclamation facility to treat to Class A+ reclaimed water standards for groundwater recharge and reuse. Class A+ reclaimed water quality is appropriate for reuse, but does not guarantee compliance with aquifer water quality standards when injected into the ground. Once constructed by the Applicant, the reclamation facility will be owned and maintained by the Goldfield Preserve Water Improvement District, a County Improvement District (CID). The plant

and sewage collection system are to be operated by A Quality Water Co. based in Williams, Arizona, nearly 3 hours from the Applicant's site.

A Quality Water Company operates small water and wastewater utilities in northern Arizona. The company does not have experience operating Aquifer Storage and Recovery wells. Their operators are certified and licensed in Arizona for Grades 2, 3 and 4 (CMX 2008). There are four grades of classification (1–4) for wastewater treatment plants, collection systems, and effluent distribution systems. The systems are classified according to the type, treatment process, and population served. The proposed 0.40-MGD treatment system at Goldfield Preserve will serve 3,283 people and include tertiary treatment, which, according to Maricopa County standards (MCEHC, 2007), classifies the system as Grade 3.

Because of the classification of the wastewater treatment facility, an on-site operator certified at Grade 2 or higher is required. If overseen by a remote operator, a Grade 3 or higher is required. If the site is overseen by a remote operator, the Grade 3 certified operator is required to reside within 3 hours travel time and must inspect the facility daily. The wastewater collection and reclaimed water distribution systems are classified based on the service area population, and will be operated by a Grade 2 or higher certified operator (MCEHC 2007). Because of these restrictions, the owner should identify an operator who resides closer to the development.

A Corporate Status Inquiry of A Quality Water Company LLC, indicates that the operator is in good standing with the Arizona Corporation Commission (ACC May 8, 2008). A search of the EPA's Safe Drinking Water Information System revealed minor monitoring violations for Grand Canyon Inn, Anazasi Water Co., and American Ranch DWID, which were listed as operated by A Quality Water Co. No health based violations were identified (SDWIS May 9, 2008). Monitoring and reporting violations are not uncommon with any system and do not represent a significant negative bias toward any operator.

3.5 Injection Wells

The storage of reclaimed water in the aquifer is currently practiced by municipalities in the Phoenix and Tucson areas. For large volumes, recharge is accomplished by water-spreading at direct surface recharge facilities such as the GRUSP and NAUSP projects in Phoenix and the Sweetwater facility in Tucson. The use of injection wells for reclaimed water recharge is more limited, however, because of the high cost of construction for small recharge volume, high maintenance costs, additional monitoring, and contingency requirements as well as water quality restrictions (HSI 2008).

In some cases, however, well injection is the preferred alternative when there is limited available land and geologic conditions are appropriate. Underground storage and recovery of reclaimed water is used by several municipalities in the Phoenix area.

> The Fountain Hills Sanitation District Underground Storage Facility consists of four Aquifer Storage Recovery (ASR) wells which inject reclaimed water in the Confined Regional Aquifer. Each well is designed for an injection and recovery rate of 400 gpm. The recharge and recovery operations are fully automated. The approximate cost of each well, fully equipped and instrumented, is approximately $1 million. The facility also includes five monitor wells for monitoring of water quality and hydraulic impacts (HSI, 2008, p. 10).

Over time, the recharge-specific capacity of the well diminishes because of the clogging from particulates, biological growth, and geochemical reactions. The wells require rehabilitation every 3–5 years, costing nearly $100,000 per well.

3.6 Plant Expansion

While it is understood that the existing plans provided by the Applicant do not need to be of sufficient detail to make a determination of expandability, the land area shown on Figure 5 of the Applicant's submittal appears to be large enough to accommodate a facility with a greater footprint. The existing conceptualized layout does not lend itself well to expansion, so a reconfiguring of the process facilities would be desirable for cost-

effective expansion. The conceptual site plan shows disinfection using ultraviolet light following clarification, but before filtration. HDR recommends that disinfection occur following filtration. There are other technologies, such as membrane bioreactors, that would allow for substantial increases in capacity on the same plant footprint. It appears there is sufficient land area to accommodate treatment of wastewater flows from the areas of The Preserve and Goldfield Ranch that are not currently planned to be served by the plant.

3.7 Precedence for Small Plants in Similar Settings

There have been prior Small Plants approved both inside and outside of MPAs in Maricopa County; however, the proposed Goldfield Small Plant is unique in several ways.

First, it is planned in an area for which known existing and additional development will occur and for which associated wastewater flows are not intended to be treated at the proposed plant. At a minimum, wastewater flows from the planned Grayhawk development and the other private lots within The Preserve and Goldfield Ranch should be considered for treatment by the proposed plant. Failing to account for additional development with this plant will lead to additional Small Plants or more septic systems. This is not consistent with the goals of the MAG 208 process.

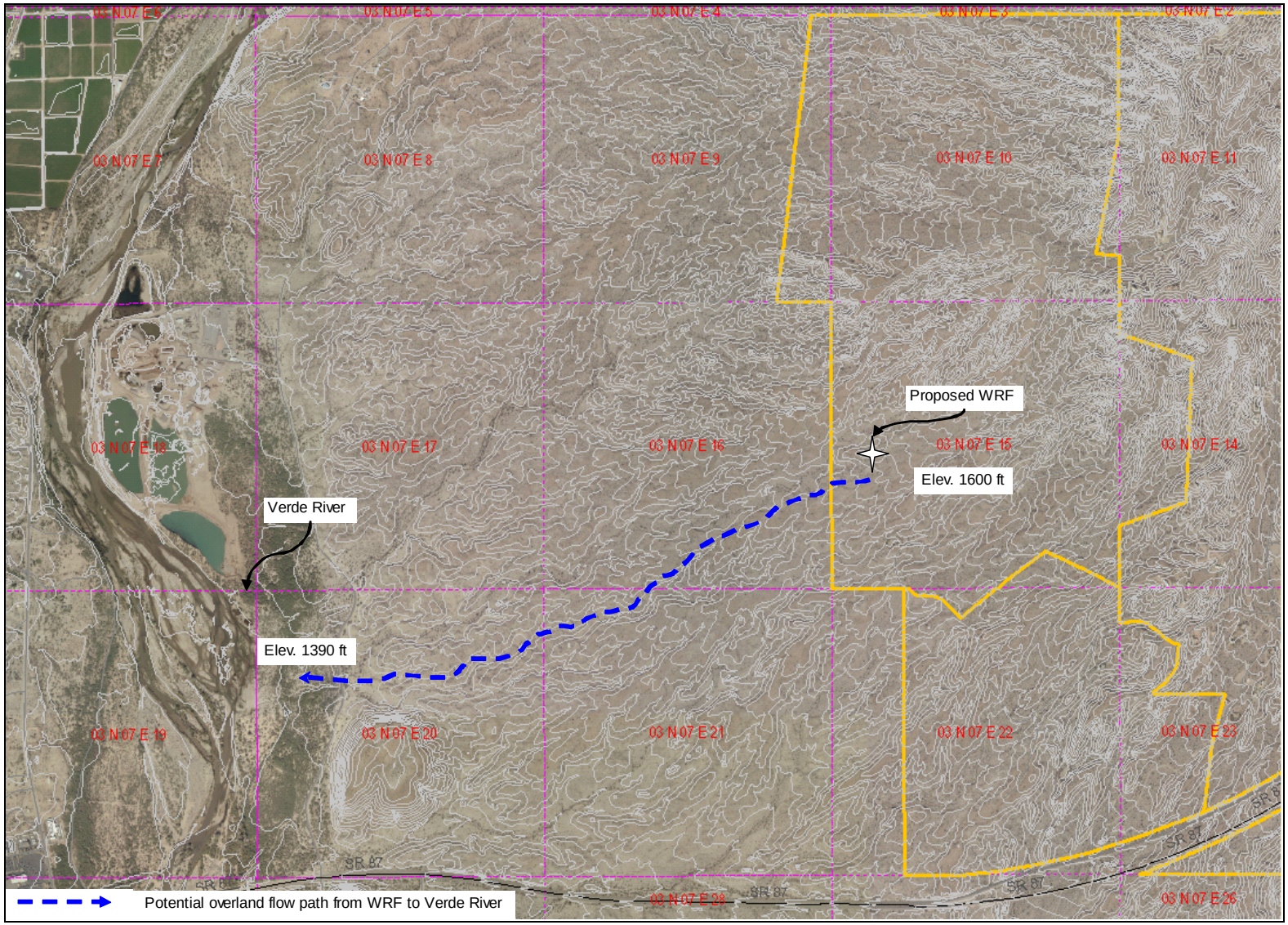
Second, it will receive wastewater from residential and commercial properties, likely including restaurants, hotels, and other service industries. Further study and land use planning regarding commercial facilities should be conducted to understand the extent to which associated wastewater flows may influence the selected treatment technology and subsequent operations of the plant.

Third, it is located in an area of highly variable land relief near a high-value perennial stream. Plant or conveyance facility failures have a greater potential for rapid flow of raw sewage by gravity to a valuable water body: the Verde River. Overland flow routing calculations estimate that an unimpeded plant failure at full capacity (0.40 MGD) could

result in raw sewage reaching the Verde River riverbed within 6 to 18 hours. Additionally, planned discharge of unusable treated wastewater is to the aquifer below the facility, which is near the Verde River (within 2.5 miles). Based on review of hydrogeologic information, direct connection of the aquifer to the subflow of the Verde River is not conclusive. Therefore, future review of the reclamation facility plans by ADEQ may necessitate the inclusion of surface water quality standards in an APP.

Fourth, it is enveloped by sensitive habitat, a Native American community, and the Tonto National Forest, and will likely never be included in an MPA within the county. In comparison to the Small Plants identified in Section 3, the responsibility for this plant will initially and likely always be a CID. Based on the factors identified above, the plant and associated sewage collection facilities may require sophisticated technology, operation, and attentive control, and should be sized to manage the wastewater from the entire area of private and developable land. Additionally, operation, maintenance, and replacement costs will be significantly higher per service connection than the typical wastewater system, which may be difficult for a CID to continuously fund.

Figure 1: Potential overland flow path from WRF to Verde River



4.0 Identification of Additional Concerns

In the process of its review, HDR identified additional issues that may be of concern to SRP-MIC. This section describes these issues.

4.1 Discharge to Subflow of the Verde River

Arizona Administrative Code (AAC) R18-11-405 B states, "A discharge shall not cause or contribute to a violation of a water quality standard established for a navigable water of the state." Surface water quality standards are typically much more stringent than those for groundwater, which means that additional treatment technology beyond that currently proposed by the Applicant may be required for reliance on injection and recovery for management of the reclaimed water.

There is uncertainty regarding whether there is a confining layer that prevents or slows movement of groundwater from underneath Goldfield Ranch to the Verde River. If it is determined through additional hydrogeologic studies that the injection of Class A+ reclaimed water from the Applicant's proposed water reclamation facility would join and mix with the subflow of the Verde River, ADEQ may consider the injection of the water into the subflow as a point source "discharge" and require an AZPDES permit, or for ADEQ to require that Surface Water Quality Standards for the respective reach of the Verde River be met as part of the APP. In either case, the reclaimed water would need to meet the discharge water quality criteria for the respective reach of the Verde River.

The surface water quality standards specific to the Verde River between Bartlett Dam and the Salt/Verde confluence are listed in the AAC R18-11-123. The designated uses of this reach of the river are wildlife (aquatic and wildlife warm water), agricultural (irrigation and livestock watering) and human (full body contact, fish consumption and domestic water supply). Because of the potential impact to human health, increasingly stringent water quality compliance is required. Any wastewater discharges adversely affecting the river must meet all of the water quality criteria or demonstrate that the river blended with the discharge would not exceed the criteria for any designated use. Appendix B is a listing of the water quality criteria by designated use.

From a water quantity and accounting standpoint, it may be difficult for the applicant to demonstrate that pumped groundwater (as is depicted in Figure 5 of the Applicant's request) can be accounted for as reclaimed water if the injected water moves quickly toward the river and flows out of the area of hydrogeologic impact.

4.2 Remote Facilities in Proximity to Sensitive Habitat and Verde River

Based on a review of the topography of The Preserve at Goldfield Ranch and of the supporting information provided by the Applicant, a number of sewage lift stations will be required to convey collected wastewater to the treatment plant. While it is intended that redundant power will be provided at the water reclamation facility, there is no mention of redundant power supply to the lift stations, which will serve as intermediate collection points of sewage throughout the planned community. Pump failures in these locations would result in raw sewage overflows into the community and washes that lead to the Verde River. It is possible to construct wastewater storage facilities to enable longer response times to pump failures, but odor and corrosion control would become a significant maintenance issue.

5.0 Evaluation of Concerns

It is HDR's assessment that wastewater collection and treatment for the entire area (The Preserve and Goldfield Ranch) are in the best interest of Maricopa County and all users and beneficiaries of the Verde River. The proposed plant should not be considered similar to other approved Small Plants serving relatively flat areas away from perennial streams. The potential for surface water impairment with raw sewage is much higher than with other plants because of the steep topography and proximity of the plant to the Verde River. HDR believes the proposed plan for on-site treatment (septic systems) for parcels C and D is not in the best interest of the protection of regional water quality. Available hydrogeologic information is inconclusive regarding an impeding layer that would prevent injected reclaimed water from reaching the subflow of the Verde River. If the injected reclaimed water reached the subflow of the Verde River, it would need to meet surface water quality standards for the respective reach of the river. Finally, the

proposed collection system, treatment plant, reclaimed water distribution system, and management of unusable reclaimed water by injection will be expensive to operate, maintain, repair, and replace for a CID that will rely heavily on approximately 1,000 single-family home sites.

The MAG 208 *Water Quality Management Plan* is the County's first defense against degradation of water quality. It is entirely appropriate and expected that MAG would apply increased scrutiny to a proposed plant that will be owned and operated by a CID, is very close to a valuable perennial stream, and for which there is limited ability to cost-effectively mitigate service failures to prevent raw sewage from entering the river. At a minimum, according to the intent of the MAG 208 planning process, the plant should be planned and sized to treat sewage from the entire area, and further assessment regarding the categorization of the plant (based on the potential for Verde River water quality impacts) should be made before MAG approves the plant for amendment into the *Water Quality Management Plan*. Regional wastewater collection and treatment best protect water quality, and more consideration needs to be given to the risks posed by the location of the proposed plant and the nature of the wastewater flow and quality characteristics it may be processing on startup or in the future.

6.0 Conclusions

While the Applicant has successfully addressed some of the issues pertinent to the MAG 208 process, there are key components in the application that have not been adequately addressed by the Applicant. Consequently, the application is inconsistent with the MAG 208 *Water Quality Management Plan*. HDR identified these inadequacies:

- Plant location and local features
- Service area
- On-site treatment
- Potential surface water quality impacts from injection
- Owner/operator financial capability

6.1 Plant Location and Local Features

The unique features of the proposed plant's location relative to the Verde River, the surrounding topography, and the increased risk it poses to surface water quality standards that have been established for the protection of wildlife and humans have not been adequately considered. While the proposed plant would have redundant power supply and on-site retention, a service failure of it or of the associated sewage lift stations throughout the community (which are not proposed to have redundant power or retention) would result in a sewage overflow that could make its way to the Verde River. The proposed plant location is 2.5 miles from and 210 feet above the Verde River. At build out capacity, unimpeded wastewater overflows from the proposed plant could reach the river within 6 to 18 hours of plant failure.

6.2 Service Area

The intent of the MAG 208 review process, as set forth by Section 208 of the CWA, is to protect water quality through a regional planning process. The MAG 208 process has also incorporated Growing Smarter Legislation principles to strengthen the regional planning role of MAG for multiple benefits to current and future generations of inhabitants. The *Water Quality Management Plan* and related amendment process for Small Plants is intended to prevent the "uncontrolled proliferation of Small Plants that could cause problems in the future." The proposed plant will serve a limited land area within a larger and completely enveloped county island that contains existing development with septic systems and plans for additional development (including Grayhawk) that will require or could benefit from sewer collection and treatment. Not providing sewer service to the entire area would encourage the proliferation of Small Plants and septic systems in the area and, in turn, increase the risk to regional water quality.

6.3 On-Site Treatment

The proposed plant would receive wastewater from residential and commercial properties. The Applicant has indicated that at least one commercial facility, a resort/spa, may be included. Land along State Route 87 will be highly desirable for commercial facilities, because they are the last opportunity along the highway for such facilities for travelers leaving the urban core and the first opportunity for those entering the urban core, along the highway. The Applicant currently proposes that parcels C and D, which would be the most desirable for commercial facilities, would be served by septic systems (on-site treatment). The Applicant states an intention to develop parcels C and D with single-family home sites greater than an acre. However, Special Use Permits can be obtained from Maricopa County to respond to consumer demand, to effectively change the zoning and land use from residential to commercial. Such changes are not subject to review by the MAG 208 process. Regardless of what type of development occurs along State Route 87 on parcels C and D, use of septic systems as the on-site wastewater treatment technology is not a sound plan for protection of regional water quality. However, inclusion of significant commercial wastewater flows into the proposed plant would likely cause wide fluctuations in influent wastewater quality that may challenge the treatment capabilities of the proposed biologically active plant.

6.4 Potential Surface Water Quality Impacts from Injection

The proposed water reclamation facility at The Preserve at Goldfield Ranch initially appears to meet the criteria for a Small Plant (less than 2.0 MGD and not requiring a CWA discharge permit) that is outside of an MPA but within 3 miles of cities or towns that have Small Plant Planning Areas. In Arizona, the CWA discharge permit is called an AZPDES permit, and is used to maintain and avoid degradation of surface water quality.

Management of the unusable portion of the proposed plant's reclaimed water through injection wells would require compliance with surface water quality standards if it is demonstrated that the injected water mixes with the subflow of the Verde River. That is, production of Class A+ reclaimed water would not be sufficient, if this were the case. Review of hydrogeologic data from the Arizona Department of Water Resources (ADWR) and SRP indicates that the existence of a continuous clay layer that would

prevent or retard injected Class A+ reclaimed water from entering the Verde River is inconclusive. Further, the analysis of the 72-hour aquifer test conducted in 1985 at The Preserve at Goldfield Ranch reveals a response more typical of a leaky confined aquifer or proximity of a recharge boundary, not of a confined aquifer. In this circumstance, ADEQ will likely require compliance with surface water quality criteria for the reach of the Verde River into which the discharge would be received. At ADEQ's discretion, these criteria could become part of the Applicant's APP, or could be implemented through a separate AZPDES permit. In either case, the potential exists for surface water quality standards (derived from the CWA) to be included in a permit. Therefore, a determination needs to be made at this point in the planning process regarding what type of plant the Goldfield Water Reclamation Facility is before an application for amendment to the MAG 208 *Water Quality Management Plan* can be made.

6.5 Owner/Operator Financial Capability

While the Applicant has demonstrated financial capability to build the plant, the operation, maintenance, and repair and replacement of infrastructure and appurtenances for the collection system, plant, and the distribution (reuse) and management (injection and recovery) system of reclaimed water would be relatively expensive for a CID made up largely of residential customers (approximately 1,000 service connections) to continuously fund. For example, if an aquifer storage and recovery well (as is implied by Applicant's Figure 5) were to fail and need to be replaced, it would cost the CID approximately $1 million to replace it. Based on historical performance of injection wells in the Maricopa County area, injection wells need to be rehabilitated every 3–5 years at an average cost of $100,000. Also, the increased risk to surface water quality translates to an increased risk of violation and fines imposed on the CID. The Applicant has stated that the developer will supplement the financial security of the CID, but does not indicate for how long. Regardless, this issue does not appear to be adequately addressed by the Applicant, and there appears to be the potential for a significant financial burden to the future CID.

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Appendix A – Hydrologic Data Evaluation

The Preserve at Goldfield Ranch

Maricopa County

Hydrologic Data Evaluation

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1. Units of the Aquifer System of the Lower Verde River Valley Groundwater Basin

Background

The Preserve at Goldfield Ranch is planning to construct a water reclamation plant on their Parcel A, located on Township 3 North, Range 7 East of the Gila and Salt River Base and Meridian (Figure 1). The estimated capacity of the water reclamation facility (WRF) is 0.4 million gallons per day (MGD). The WRF will treat the effluent to A 1+ reclaimed water standard and will be stored underground using well injection. Three recharge wells will be used and will be spaced approximately one mile apart. One monitor well will be placed down gradient of the recharge wells.

The Preserve at Goldfield Ranch is going through a permitting process for the approval of its WRF under the MAG 208 Plan. The Salt River Pima Maricopa Indian Community (SRPMIC) has expressed concerns of potential impacts to groundwater resulting from the operation of the WRF, and the disposal of the reclaimed water to the underlying aquifer. Some of these concerns presented by the Preserve at Goldfield Ranch on their March 20, 2008 presentation to the MAG committee are:

- Groundwater level decline will affect the community's water resources
- Storm water and irrigation water may percolate into upper/middle aquifer and impact the Verde River.
- Clay layer does not confine upper and lower aquifer and thins out at the edges
- Is the Fountain Hills (Lower Verde River Valley) groundwater basin in hydraulic connection with the adjacent basins? (For example the East Salt River Basin).

Both groundwater quantity and quality issues are related to each of the four potential impacts listed above. The brief hydrogeologic analysis that follows will provide the essential elements to address these issues. More detailed information can be obtained from the references cited.

Geologic Summary

The area of the planned Preserve at Goldfield Ranch is located on the west side of the Lower Verde River Valley groundwater Basin (LVRVGB). Its surface expression is a valley that is elongate in a northwest – southeast direction with a length of approximately twenty eight miles. Its maximum width in a northeast – southwest

direction is twelve miles. The northwest – southeast orientation of this basin is the predominant alignment of the young Cenozoic age sedimentary basins of the Basin and Range physiographic province of Arizona and in general reflects the geologic history of this region (Damon, et al., 1984 and Dickinson, 1989).

The surrounding highlands that bound the Lower Verde River Valley groundwater basin are the Mazatzal Mountains to the east and north, the McDowell Mountains to the west and the Goldfield Mountains to the south. The principal drainages of this basin are the Verde River and its two main tributaries in this area which are Camp Creek and Sycamore Creek. The Verde River flows to the south traversing the basin along most of its central area. The Salt River flows to the west along the southern edge of the basin, and receives the water of the Verde River where the McDowell Mountains contact the Goldfield Mountains just upstream from Granite Reef Dam.

The LVRVGB contains an alluvial aquifer system contained in sedimentary rock units deposited in the relatively recent geologic past. These sediments correspond to the Gila Assemblage (Scarborough, 1989), which is the youngest of the four "stratotectonic assemblages" of southern Arizona. It corresponds to Unit II of Eberly and Stanley (1978), and is the sedimentotogical response to the most recent tectonic event affecting southern Arizona—the Basin and Range disturbance. These sediments are basin-fill units that have characteristics suggesting deposition totally within the confines of the present-day physiographic basins. Skotnicki and others (2003) identified four basin-fill units of Late Tertiary age in the LVRVGB. From oldest to youngest they are: (1) the Needle Rock Formation, (2) the Pemberton Ranch Formation, (3) younger basin-fill sedimentary deposits, and (4) Quaternary surficial deposits.

The Needle Rock Formation (sandstone and conglomerate) forms the lower aquifer. It is overlain by and partially grades laterally into the Pemberlon Ranch Formation, which is composed mostly of interbedded siltstone, claystone, fine-grained sandstone, and minor coarser-grained sandstone and conglomerate. These predominantly fine-grained deposits behave as an aquiclude separating the lower and upper units of the LVRVGB aquifer system throughout a large part of the basin. Two units overlie the

Pemberton Ranch Formation. The lowermost is composed predominantly of sandstone and conglomerate and forms the younger basin-fill deposits of Late Tertiary age. Resting on these units, mostly in erosional unconformity, are relatively thin river and piedmont deposits of Pleistocene-Holocene age. The younger basin-fill unit, and in places the river and piedmont deposits, compose the upper aquifer of this basin. The sedimentary sequence observed in the LVRVGB is common in several other young alluvial basins of southern Arizona, indicating similar erosional and depositional history related to common structural events.

In the East Salt River Valley basin to the south the three commonly reported units of the aquifer system are: Lower Alluvial Unit, Middle Alluvial Unit, and Upper Alluvial Unit. They are comparable to the Needle Rock Formation, the Pemberton Ranch Formation and the younger basin-fill respectively. Some wells in Scottsdale penetrate a red-colored unit composed of sandstone and conglomerate (the 'Camel's Head Formation') which is older than and underlies the Lower Alluvial Unit. This 'red unit' is well exposed in the southern margin of the valley on the south side of Fountain Hills (Skotnicki, 1995). Near Camelback Mountain the red unit is a fractured bedrock aquifer and a limited volume of groundwater is pumped from this unit by Salt River Project wells.

The formation of the LVRVGB is the result of regional crustal extension which occurred mostly between 35 Ma to 8 (+/-) Ma (Ma = millions of years ago) in the western USA (Rehrig, 1986). Two separate tectonic events have been identified. The early one, recognized as the Mid-Tertiary orogeny (Oligocene to Middle Miocene) was more intense and of longer duration. The later event is the Basin and Range disturbance (post 15 Ma). Many of the present-day basins in southern Arizona started forming during the Mid-Tertiary orogeny. The red unit was probably deposited during this episode and most of the consistent, unidirectional tilting of this unit is characteristic of this event. Spencer and Reynolds (1986) divide the Basin and Range region of Arizona into regional tilt-block domains in which rocks of middle Tertiary age dip predominantly in one direction. They interpret dip direction in each tilt-block domain is toward the breakaway of the detachment fault that underlies the block. This indicates that the normal (listric) faults in

the upper plate of the detachment fault dip in the same direction than that of the master fault.

The Phoenix area including the LVRVGB is within the "Camelback Domain" where rocks of middle Tertiary age dip to the southwest. This bedding attitude is observed in the red beds that crop out at Mount McDowell in the southern part of the LVRVGB (Skotnicki, 1995). Menges and Pearthree (1989) reported that northwest-trending basin orientation in southern Arizona predominantly reflect southwest-northeast extension associated with middle Tertiary deformation. Many of these basins were overprinted by the subsequent formation of Late Miocene basins formed during the Basin and Range disturbance (Nations et al., 1985; Keith et al., 1985; Menges, 1983; and Scarborough, et al., 1983).

Early reconnaissance geologic mapping identified the LVRVGB as a basin separated from the Salt River basin to the west (Wilson et.al, 1957). The enclosing mountains are composed of sedimentary volcanic and metamorphic rocks of Precambrian (Early Proterozoic) age intruded by granites of Early and Middle Proterozoic age. Resting on these rocks, and commonly in fault contact with them, are sedimentary and volcanic rocks of Middle Tertiary age (red beds and predominantly felsic- to mafic-composition volcanic rocks). The surface distribution of all the rock units - Precambrian, Middle Tertiary and Late Tertiary age exposed in the LVRVGB and surrounding area indicates an "L" shape for the physiography of this basin (Richard et al., 200). This is likely the influence of the confluence of Salt and Verde Rivers in the southern part of the basin, and the resulting erosion and sedimentation related to both drainages. Both the residual aeromagnetic map of Arizona (Sauck and Sumner, 1970) and the residual Bouguer gravity anomaly maps of Arizona (Lysonski et al., 1981) show the axis of the LVRVGB striking in a north-northwest direction. Skotnicki and others (2003) reported that this configuration is consistent with the deepest portion of the basin adjacent to and parallel to the gravity-low axis. The gravity-low exists where it does, towards the west side of the basin, probably as a result of faulting along Camp Creek fault and the subsequent formation of a half graben, with its down-dropped side on the east-northeast (Figure 2). This type of structure is common in basins formed during both the Mid-

Tertiary orogeny and the Basin and Range disturbance. Modeling of the gravity data indicates a maximum depth to bedrock in the LVRVGB of 4800 – 6400 feet (Oppenheimer and Sumner, 1980).

The more pertinent and complete geologic information of the LVRVGB is contained in Skotnicki (1995), and Skotnicki and others (2003).

Groundwater Hydrology

Hydrostratigraphy

Three stratigraphic units constitute the components of the aquifer system of the LVRVGB. From older to younger they are: The Needle Rock Formation (map unit Tsn), the Pemberton Ranch Formation (map unit Tsp), and the younger basin-fill deposits (map unit Tsy and Tsm), (Skotnicki et al., 2003), (Table 1). Thomsen and Schumann (1968) called these units 'consolidated alluvium'. The youngest Pleistocene-Holocene deposits were mapped by Skotnicki (1995) and grouped into four major groups of which the Piedmont Deposits and the River Deposits may in places be water bearing . They are predominantly unconsolidated silt, sand and gravel, and in places convey the underflow of the Verde River and its tributaries. The younger basin-fill (consolidated alluvium of Thomsen and Schumann, 1968) has low permeability measured in shallow wells in Sycamore Creek with results that ranged from 2-12 g/d-ft^2 as compared to the unconsolidated alluvium value of 5,200 g/d-ft^2.

The aquifer above the Pemberton Ranch Formation is termed the Alluvial Floodplain Aquifer (HSI, 2003). The Pemberton Ranch Formation is composed predominantly of siltstone, claystone and fine-grained sandstone and also contains minor coarse-grained sandstone and conglomerate. It is considered an aquiclude/aquitard, confining groundwater in the predominantly subjacent Needle Rock Formation (Figure 3). Deposited during a period of slow subsidence of the LVRVGB it is, in general, similar in lithology and depositional origin to thick fine-grained, low permeability clastic deposits in other basins of southern Arizona (Holzer and Lluria, 1987). The areal extension and thickness of the Pamberton Ranch Formation is an important factor in determining the possible hydraulic connection of the Alluvial Floodplain Aquifer and the

Needle Rock Formation (regional aquifer). If the fine-grained unit is absent in the mountain front edges of the basin, as is the case in other southern Arizona basins, direct recharge to the regional aquifer from runoff can take place in these areas.

The regional aquifer termed here the Confined Regional Aquifer (HSI, 2003), is contained within conglomerate of the Needle Rock Formation. This unit, estimated to be as much as 1,000 feet thick (Deslauriers, 1977), appears to be fracture, providing adequate secondary porosity and permeability. The red unit may underlie the Needle Rock Formation, as it does in parts of the East Salt River Basin, and be part of the Regional Confined Aquifer in the LVRVGB.

Aquifer Characteristics of the Regional Aquifer

Pumping tests carried out in the Fountain Hills (HSI, 2003, and E.L. Montgomery and Associates, Inc, 2004), and in the Goldfield Heights area indicate that the Regional Aquifer is confined. In the Fountain Hills area transmissivity ranged from 23,000 to 71,000 gpd/ft (HSI, 2003) with a storativity from 0.0044 to 0.00014. These were from short duration pump tests. Two production wells of the Chaparral City Water Company were pump-tested for 72 hours and gave transmissivities of 190,000 gpd/ft, and 209,000 gpd/ft, respectively. The storativity for these wells ranged from 0.00015 to 0.00092 (E.L. Montgomery and Associates, Inc., 2004). In the Goldfield Heights area (Preserve at Goldfield Ranch) a 72 hour pumping test was carried out in 1985 by E.L. Montgomery and Associates, Inc. Transmissivity values obtained from one well and an observation well averaged 45,000 gpd-ft with a storativity of 0.0002 (Southwest Groundwater Consultants, Inc., 2006).

Analysis and Observations

This report is based on available geologic and hydrogeologic data from previous work in the Fountain Hills and the Goldfield Heights area. Analysis of information shows:

- The area of the Preserve at Goldfield Ranch is located in the western side of the LVRVGB, a structural basin formed probably mostly during the Basin and Range

disturbance. Its axis strikes north-northwest, as indicated by gravity and aeromagnetic surveys. Most of the faults mapped in the highlands surrounding the basin also strike north-northwest with down dropped sides to the northeast. Movement on the Camp Creek fault may have formed a half graben which determined the structural morphology of the LVRVGB.

- An early period of high energy erosion and sedimentation in the LVRVGB deposited the Needle Rock Formation (predominantly conglomerate) which was fractured and constitutes the present day Confined Regional Aquifer. This period was followed by a period of sedimentation dominated by lacustrine (lake) deposits. Fine-grained deposits of the Pemberton Ranch Formation were deposited during this time. This unit, as in other Basin and Range basins of Arizona, has rapid facies changes in both horizontal and vertical directions. It may be interbedded with coarse alluvial fan deposits near the edge of the basin. Because of the predominance of clay and silt, resulting in low permeability, this unit is an aquiclude and imparts confinement to the regional aquifer where it overlies the Needle Rock Formation. After the regional integration of the Verde River drainage an active fluvial regimen deposited the younger basin-fill sediments which are partially covered with weakly consolidated alluvial deposits (or 'unconsolidated alluvium'). These younger deposits, and some of the more permeable portions of the basin-fill units overlying the Pemberton Ranch Formation, form the Floodplain Alluvial Aquifer.

- After examination of numerous drillers logs from The Preserve at Goldfield Ranch and adjacent areas, we can conclude that there is insufficient good-quality information to map the extent of the Pemberton Ranch Formation in the study area with the sufficient accuracy. Only three wells on Section 10 of T3N R6E provide quality data (Figure 4). These are wells GE-1, GE-2 and GE-3, drilled in 1985 and logged by E.L. Montgomery and Associates, Inc. These wells intersect 250 feet of silty clay at 400 feet depth. These three wells are located on the northwest corner of Parcel A of the Preserve at Goldfield Ranch (Southwest Groundwater Consultants, 2006).

- The only pumping test available from the Preserve at Goldfield Ranch reported transmissivity and storativity values comparable to some of the wells in Fountain Hills. This single 72-hour test however, shows much lower transmissivity than 72-hour tests carried out in two of the municipal water supply wells in Fountain Hills. The storativity for these three wells are of the same magnitude.

- Examination of the 72-hour aquifer test of the two municipal supply wells in Fountain Hills shows a typical Confined aquifer response. In contrast, the analysis of the 72-hour aquifer test of the Preserve at Goldfield Ranch shows a response more typical of a leaky confined aquifer or the proximity of a recharge boundary. These conditions require further investigation.

Recommendations

To better define and map the extent of the Pemberton Ranch Formation (clay layer/aquiclude), the following is recommended:

- Drill two test boreholes to a depth of 1,000 feet—one at the location of the proposed recharge wells, and one approximately equidistant between the recharge wells and test borehole A (3-7) 24 cbd (Figure 4). Detailed lithologic logging and borehole geophysical logging should be carried out at each test hole.

- Undertake a geoelectric (TEM, CSAMT, CR) survey to determine depth and extent of the clay layer from the Verde River to the east and south boundaries of The Preserve at Goldfield Ranch.

- Undertake a 7-day pump test at well G-3 to establish the nature of the confined aquifer (confined/semi confined) and determine possible recharge of the regional aquifer from the alluvial aquifer.

Other Questions From The SRPMIC

Will groundwater level decline affect the community's water resources?

For a proper evaluation of the potential effects of pumping in the Preserve at Goldfield Ranch, a groundwater model needs to be developed.

Storm water and irrigation water may percolate into upper/middle aquifer and impact the Verde River (water quality)?

The abundance of fine-grained sediments in the soil system below the Preserve at Goldfield Ranch should produce a soil aquifer treatment effect on any water percolating in the soil and eliminate/mitigate any water quality impacts. A pilot test should be carried out.

Is the Fountain Hills (LVRVGB) in hydraulic connection with the East Salt River Valley Basin?

No, it is not.

The Use of Injection Wells for Reclaimed Water Recharge in the Phoenix Area

The storage of reclaimed water in the aquifer is currently practiced by many municipalities in both the Phoenix and Tucson areas. The preferred method for large volume is by water-spreading at direct surface recharge facilities. The recovery is then carried out using existing wells. Examples are the GRUSP and NAUSP projects in Phoenix and the Sweetwater facility in Tucson. Vadose zone wells are also used by some municipalities. Scottsdale's Water Campus has been using this methodology successfully for several years. The use of injection wells for reclaimed water recharge is more limited. Some of the reasons for this are:

- Smaller recharge water volume
- High cost of well construction
- High maintenance cost
- Water quality restrictions
- More monitoring requirements
- More detailed contingency plans

In some cases however, well injection is the preferred alternative. When available land is limited because of its high cost or inability to purchase or lease for the construction of recharge basins, and geologic conditions do not favor the use of vadose zone recharge wells, only injection wells can be employed.

Underground storage and in some cases recovery of reclaimed water is used by several municipalities in the Phoenix area. The first project was the INTEL recharge project in Chandler, where treated industrial effluent is injected into the Middle Alluvial Unit. There is no recovery of the injected water in this facility. There are four other projects that use injection. These are Tumbleweed Park (Chandler), Arrowhead Ranch (Glendale), Fountain Hills Sanitation District, and Pima Utilities.

The Fountain Hills Sanitation District Underground Storage Facility consists of four ASR (Aquifer Storage Recovery) wells which store reclaimed water in the Confined Regional Aquifer. Each well is designed for an injection and recovery rate of 400 gpm. The recharge and recovery operations are fully automated. The approximate cost of each well, fully equipped and instrumented, is approximately one million dollars. The facility also includes five monitor wells for monitoring of water quality and hydraulic impacts. With time and use the recharge specific capacity (the measurement of the ability to recharge) of the well diminishes due to the clogging from particulates, biological growth, and geochemical reactions. The wells then need to be rehabilitated. In the case of the ASR wells of the Fountain Hills Sanitary District, the cost of well rehabilitation is approximately $100,000 per well (Small et al., 2007). The rehabilitation is required every three to five years.

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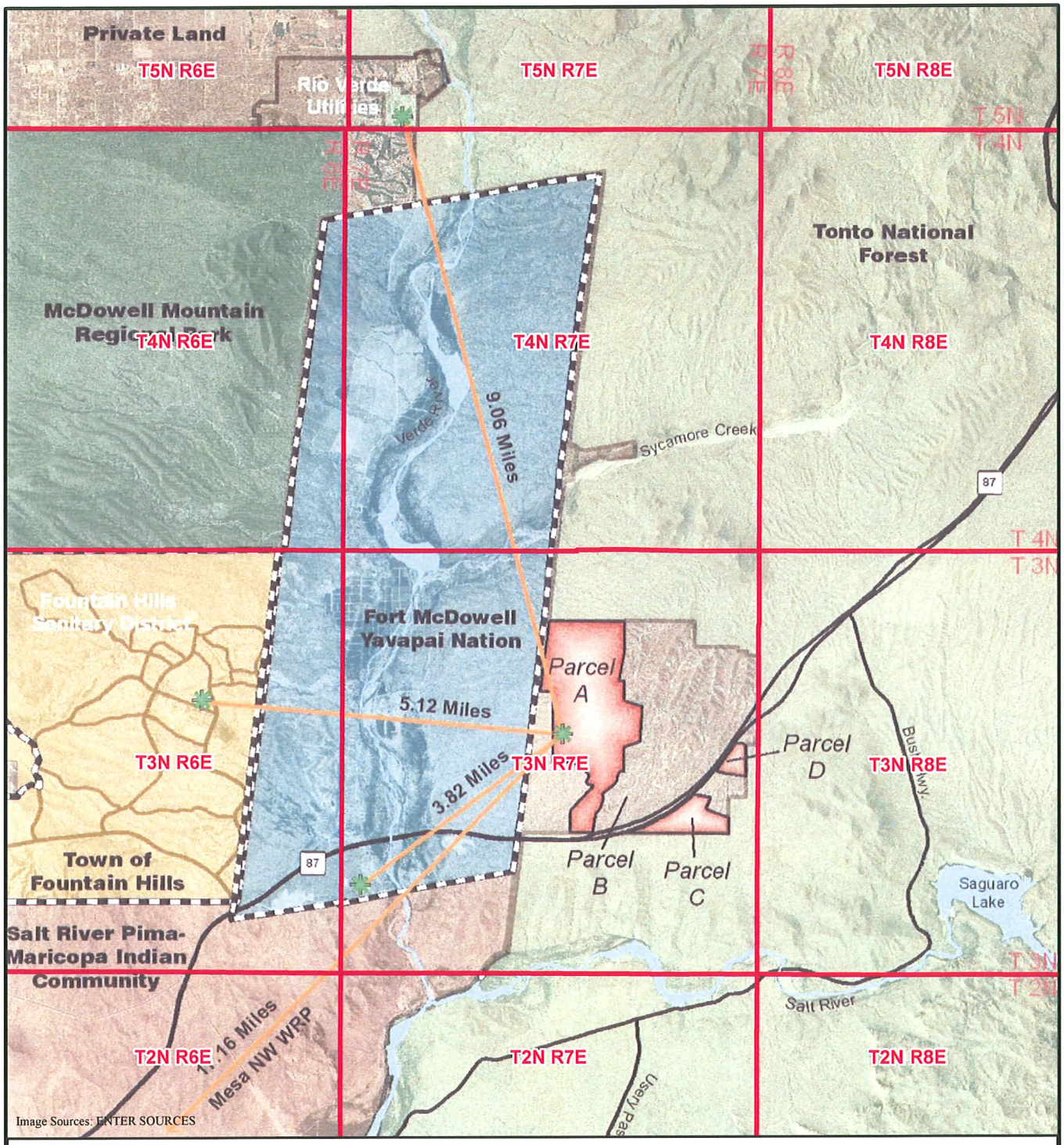

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Location Map
The Preserve at Goldfield Ranch

Figure 1

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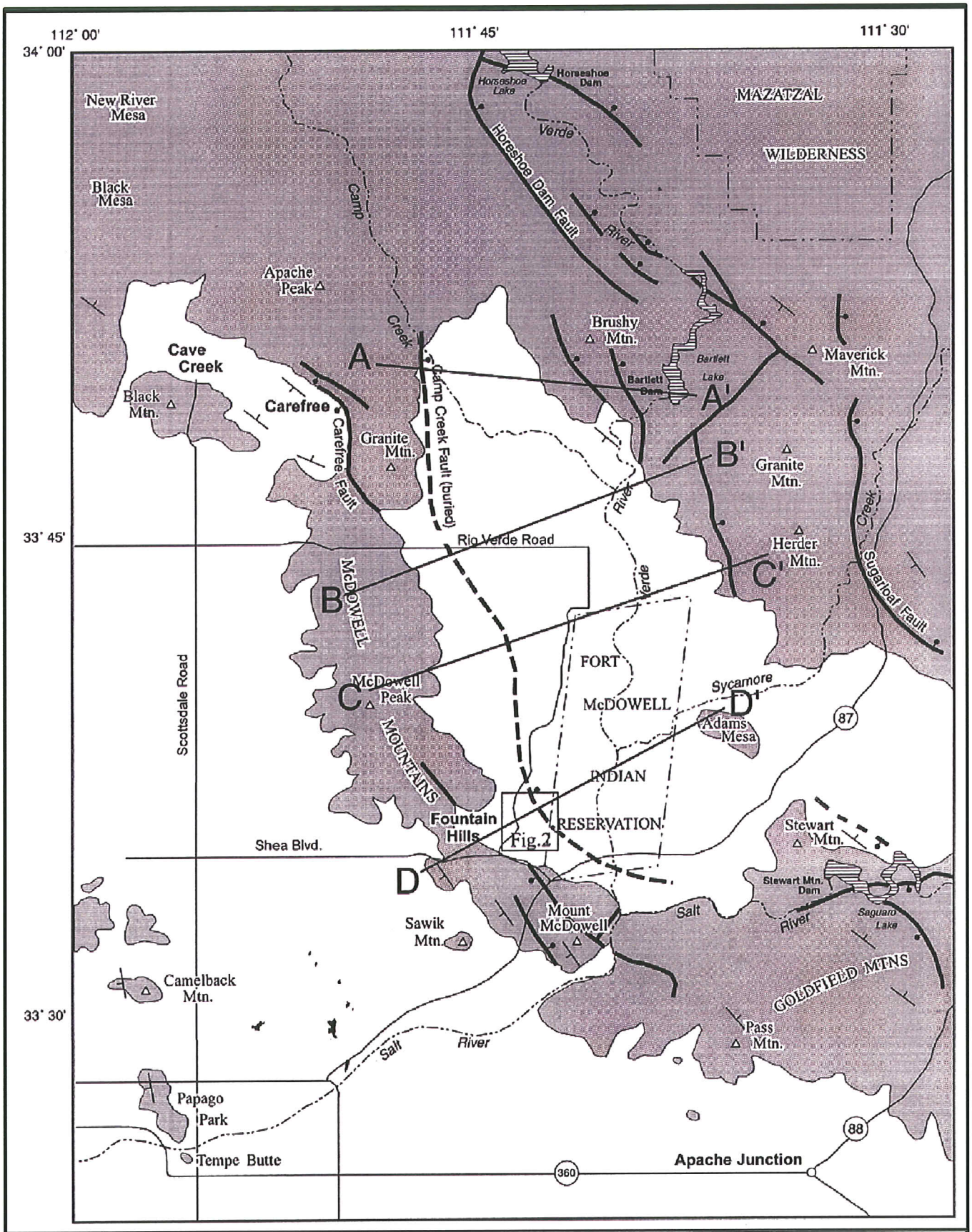

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Structural Map and Location of Cross-Sections of the Lower Verde River Valley Groundwater Basin

*Skotniki (2003)

Figure 2

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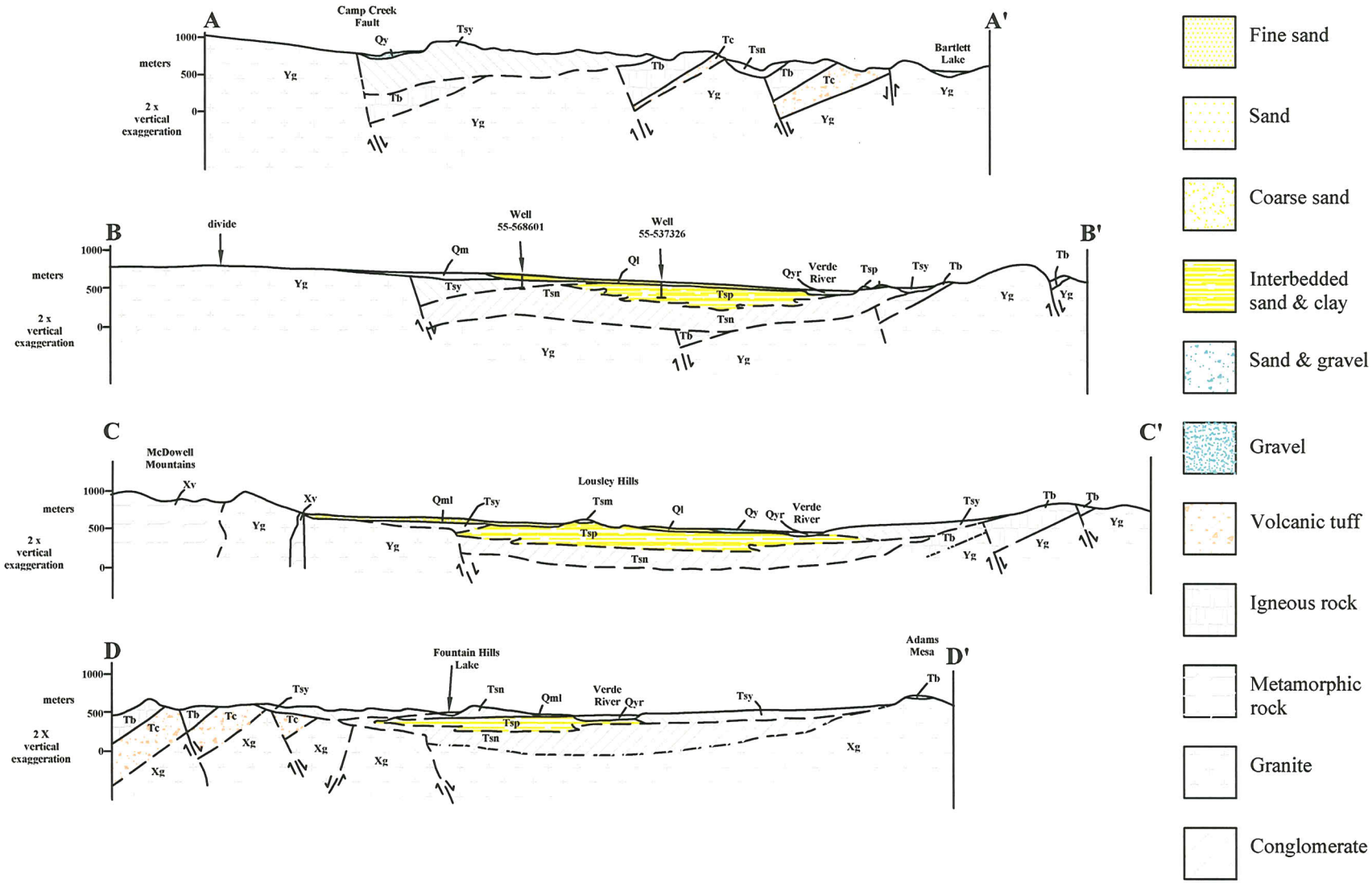

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*Skotnicki (2003)

Geologic Cross-Section of the Lower Verde River Valley Groundwater Basin

Figure 3

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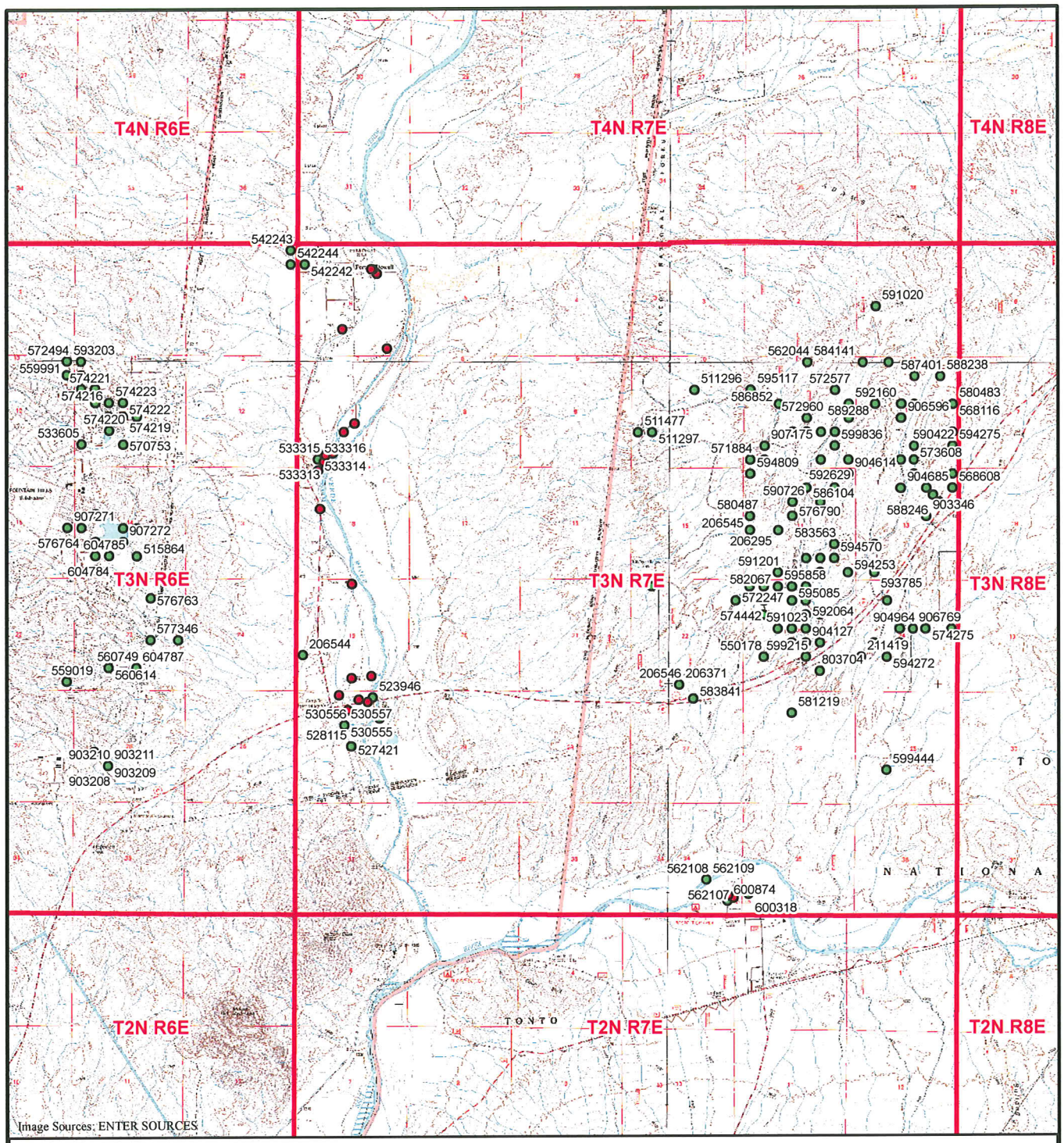

Legend

- GWSI Wells
- 55 Wells

0 0.5 1 2 Miles

N

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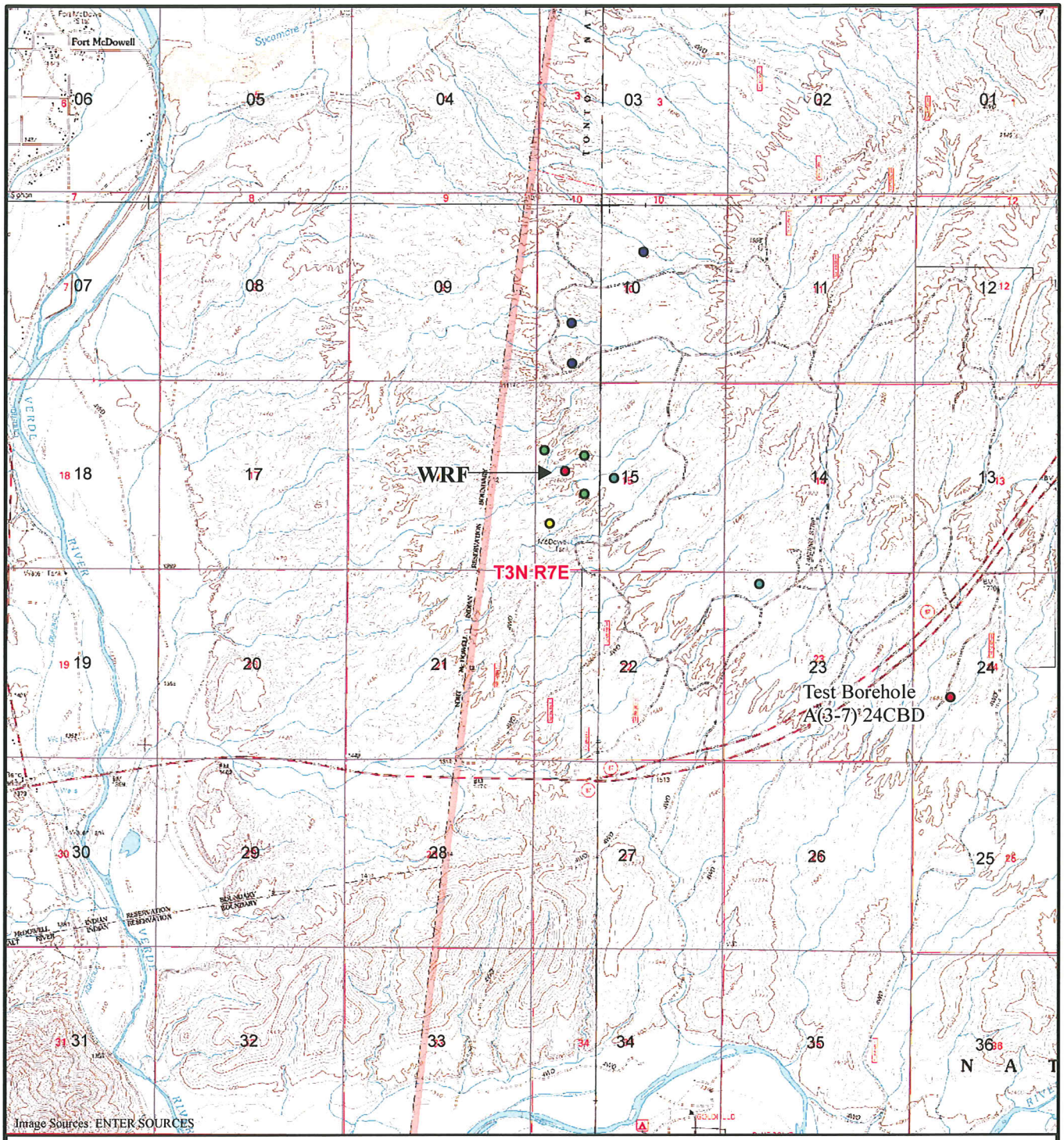
Fountain Hills and The Preserve
At Goldfield Ranch
Location of Wells

Figure 4

S:\08-538\GIS\Maps\Figure 4 Well Inventory.mxd 05/13/08



Legend

- Proposed Monitor Well
- Proposed Recharge Wells
- Recommended Test Wells
- Water Supply Wells

0 0.5 1 2 Miles

N

HydroSystems Inc.

The Preserve at Goldfield Ranch
Recommended Test Wells

Figure 5

S:\08-538\GIS\Maps\Figure 5 Recomended Test Wells.mxd 05/14/08

Table 1

UNITS OF THE AQUIFER SYSTEM

Lower Verde River Valley Groundwater Basin

Unit	Formation	Age	Type	Predominant Lithology	Aquifer Type	Structural Association
Flood Plain Alluvial Aquifer	Alluvium	Holocene-Pleistocene	Alluvial/Fluviatile	Sand, gravel, silt	Unconfined	Youngest fluvial cycle
Clay Layer	Pemberton Ranch	Pleistocene-Pliocene	Lacustrine	Siltstone, claystone, minor sandstone	Aquiclude	Basin & Range: disturance basin subsidence
Confined Regional Aquifer	Needle Rock	Late Miocene	Fluviatile: high energy	Conglomerates, breccias, sandstone	Confined/Semi-Confined	Basin & Range disturbance: high angle faulting

Appendix B – Department of Environmental Quality – Water Quality Standards

BASIN	SEGMENT	LOCATION	A&Wc	A&Ww	A&We	A&Wedw	FBC	PBC	DWS	FC	AgI	AgL
VR	Meath Dam Tank	35°07'46"/112°27'35"		A&Ww			FBC			FC		AgL
VR	Mullican Place Tank	34°44'16"/111°36'08"		A&Ww			FBC			FC		AgL
VR	Oak Creek (Unique Water)	Headwaters to confluence with unnamed tributary at 34°57'08.5"/ 111°45'13"	A&Wc				FBC		DWS	FC	AgI	AgL
VR	Oak Creek (Unique Water)	Below confluence with unnamed tributary		A&Ww			FBC		DWS	FC	AgI	AgL
VR	Oak Creek, West Fork (Unique Water)	Tributary to Oak Creek at 34°59'13"/111°44'46"	A&Wc				FBC			FC		AgL
VR	Odell Lake	34°56'02"/111°37'52"	A&Wc				FBC			FC		
VR	Peck's Lake	34°47'07"/112°02'30"	A&Wc				FBC			FC	AgI	AgL
VR	Perkins Tank	35°06'42"/112°04'08"	A&Wc				FBC			FC		AgL
VR	Pine Creek	Headwaters to confluence with unnamed tributary at 34°21'51"/ 111°26'46"	A&Wc				FBC		DWS	FC	AgI	AgL
VR	Pine Creek	Below confluence with unnamed tributary		A&Ww			FBC		DWS	FC	AgI	AgL
VR	Red Creek	Tributary to the Verde River at 34°09'47"/111°43'12"		A&Ww			FBC			FC		AgL
VR	Red Lake	35°12'19"/113°03'55"		A&Ww			FBC			FC		AgL
VR	Reservoir #1	35°13'05"/111°50'07"		A&Ww			FBC			FC		
VR	Reservoir #2	35°13'16"/111°50'36"		A&Ww			FBC			FC		
VR	Roundtree Canyon Creek	Tributary to Tangle Creek at 34°09'04"/111°48'18"		A&Ww			FBC			FC		AgL
VR	Scholze Lake	35°11'53"/112°00'31"		A&Ww			FBC			FC		AgL
VR	Spring Creek	Headwaters to confluence with unnamed tributary at 34°57'23.5"/ 111°57'19"	A&Wc				FBC			FC	AgI	AgL
VR	Spring Creek	Below confluence with unnamed tributary to Oak Creek		A&Ww			FBC			FC	AgI	AgL
VR	Steel Dam Lake	35°13'36"/112°24'51"	A&Wc				FBC			FC		AgL
VR	Stehr Lake	34°21'59"/111°40'00"		A&Ww			FBC			FC		AgL
VR	Stone Dam Lake	35°13'36"/112°24'16"	A&Wc				FBC			FC	AgI	AgL
VR	Stoneman Lake	34°46'44"/111°31'05"	A&Wc				FBC			FC	AgI	AgL
VR	Sullivan Lake	34°51'46"/112°27'41"		A&Ww			FBC			FC	AgI	AgL
VR	Sycamore Creek	Headwaters to confluence with unnamed tributary at 35°03'40"/ 111°57'28"	A&Wc				FBC			FC	AgI	AgL
VR	Sycamore Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC	AgI	AgL
VR	Sycamore Creek	Tributary to Verde River at 33°37'55"/111°39'58"		A&Ww			FBC			FC	AgI	AgL
VR	Sycamore Creek	Tributary to Verde River at 34°04'42"/111°42'14"		A&Ww			FBC			FC		AgL
VR	Tangle Creek	Tributary to the Verde River at 34°05'06"/111°42'36"		A&Ww			FBC			FC	AgI	AgL
VR	Trinity Tank	35°27'44"/112°47'56"		A&Ww			FBC			FC		AgL
VR	Verde River	Above Bartlett Dam		A&Ww			FBC			FC	AgI	AgL
VR	Verde River	Below Bartlett Dam		A&Ww			FBC		DWS	FC	AgI	AgL
VR	Walnut Creek	Tributary to Big Chino Wash at 34°58'12"/112°34'55"		A&Ww			FBC			FC		AgL
VR	Watson Lake	34°35'15"/112°25'05"		A&Ww			FBC			FC	AgI	AgL
VR	Webber Creek	Tributary to the East Verde River at 34°18'50"/111°19'55"	A&Wc				FBC			FC		AgL
VR	West Clear Creek	Headwaters to confluence with Meadow Canyon at 34°33'40"/ 111°31'30"	A&Wc				FBC			FC		AgL
VR	West Clear Creek	Below confluence with Meadow Canyon		A&Ww			FBC			FC	AgI	AgL
VR	Wet Beaver Creek	Headwaters to unnamed springs at 34°41'17"/111°34'34"	A&Wc				FBC			FC	AgI	AgL
VR	Wet Beaver Creek	Below unnamed springs		A&Ww			FBC			FC	AgI	AgL
VR	Whitehorse Lake	35°07'00"/112°00'47"	A&Wc				FBC		DWS	FC	AgI	AgL
VR	Williamson Valley Wash	Headwaters to confluence with Mint Wash at 34°49'05"/ 112°37'55"			A&We			PBC				AgL

Appendix B. List of Surface Waters and Designated Uses
Abbreviations

River Basins
BW = Bill Williams
CM = Colorado Mainstem (includes Red Lake)
LC = Little Colorado
MG = Middle Gila (includes Gila River below San Carlos Indian Reservation, Salt River below Granite Reef Dam and Phoenix area waterbodies)
RM = Rios de Mexico (includes Rio Magdalena, Rio Sonoita, and Rio Yaqui Basins)
SC = Santa Cruz
SP = San Pedro
SR = Salt River (includes Salt River and tributaries above Granite Reef Dam)
UG = Upper Gila (includes Gila River and tributaries above San Carlos Indian Reservation)
VR = Verde River
WP = Wilcox Playa

Designated Uses
A&Wc = Aquatic and Wildlife cold water
A&Ww = Aquatic and Wildlife warm water
A&We = Aquatic and Wildlife ephemeral
A&Wedw = Aquatic and Wildlife effluent dependent water
FBC = Full-body Contact
PBC = Partial-body Contact
DWS = Domestic Water Source
FC = Fish Consumption
AgI = Agricultural Irrigation
AgL = Agricultural Livestock Watering

Other
U = Unique Water
EDW = Effluent-dependent Water
WWTP = Wastewater Treatment Plant
Km = kilometers

BASIN	SEGMENT	LOCATION	A&Wc	A&Ww	A&We	A&Wedw	FBC	PBC	DWS	FC	AgI	AgL
BW	Alamo Lake	34°14'45"/113°35'00"		A&Ww			FBC			FC		AgL
BW	Big Sandy River	Tributary to the Santa Maria River at 34°18'36"/113°31'34"		A&Ww			FBC			FC		AgL
BW	Bill Williams River	Tributary to the Colorado River at 34°18'04"/114°08'10"		A&Ww			FBC			FC		AgL
BW	Blue Tank	34°40'14"/112°58'16"		A&Ww			FBC			FC		AgL
BW	Boulder Creek	Headwaters to confluence with unnamed tributary at 34°41'14"/ 113°03'34"	A&Wc				FBC			FC	AgI	AgL
BW	Boulder Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC	AgI	AgL
BW	Burro Creek (Unique Water)	Headwaters to confluence with Boulder Creek at 34°36'47"/ 113°18'00"		A&Ww			FBC			FC		AgL
BW	Burro Creek	Below confluence with Boulder Creek		A&Ww			FBC			FC		AgL
BW	Conger Creek	Headwaters to confluence with unnamed tributary at 34°45'13"/ 113°05'45"	A&Wc				FBC			FC		AgL
BW	Conger Creek	Below confluence with unnamed tributary		A&Ww			FBC			FC		AgL
BW	Coors Lake	34°36'20"/113°11'25"		A&Ww			FBC			FC		
BW	Copper Basin Wash	Headwaters to confluence with unnamed tributary at 34°28'11"/ 112°35'31"	A&Wc				FBC			FC		AgL
BW	Copper Basin Wash	Below confluence with unnamed tributary			A&We			PBC				AgL
BW	Cottonwood Canyon	Headwaters to Bear Trap Spring at 34°45'10"/112°52'32"	A&Wc				FBC			FC		AgL
BW	Cottonwood Canyon	Below Bear Trap Spring		A&Ww			FBC			FC		AgL
BW	Date Creek	Tributary to the Santa Maria River at 34°18'11"/113°29'53"		A&Ww			FBC			FC		AgL

Appendix A: Numeric Water Quality Criteria
Table 1. Human Health and Agricultural Designated Uses

PARAMETER	CAS* NUMBER	DWS (µg/L)	FC (µg/L)	FBC (µg/L)	PBC (µg/L)	AgI (µg/L)	AgL (µg/L)
Acenaphthene	83-32-9	420	2670	84,000	84,000	NNS	NNS
Acenaphthylene	208-96-8	NNS	NNS	NNS	NNS	NNS	NNS
Acrolein	107-02-8	3.5	25	700	700	NNS	NNS
Acrylonitrile	107-13-1	0.07	0.7	3	56,000	NNS	NNS
Alachlor	15972-60-8	2	NNS	14,000	14,000	NNS	NNS
Aldrin	309-00-2	0.002	0.0001	0.08	42	p	p
Ammonia	7664-41-7	NNS	NNS	NNS	NNS	NNS	NNS
Anthracene	120-12-7	2100	1000	420,000	420,000	NNS	NNS
Antimony (as Sb)	7440-36-0	6 T	4,300 T	560 T	560 T	NNS	NNS
Arsenic (as As)	7440-38-2	50 T	1450 T	50 T	420 T	2000 T	200 T
Asbestos	1332-21-4	a	NNS	NNS	NNS	NNS	NNS
Atrazine	1912-24-9	3	NNS	49,000	49,000	NNS	NNS
Barium (as Ba)	7440-39-3	2000 T	NNS	98,000 T	98,000 T	NNS	NNS
Benzene	71-43-2	5	140	93	93	NNS	NNS
Benzidine	92-87-5	0.0002	0.001	0.01	4,200	0.01	0.01
Benz (a) anthracene	56-55-3	0.048	0.49	1.9	1.9	NNS	NNS
Benzo (a) pyrene	50-32-8	0.2	0.05	0.2	0.2	NNS	NNS
Benzo (ghi) perylene	191-24-2	NNS	NNS	NNS	NNS	NNS	NNS
Benzo (k) fluoranthene	207-08-9	0.048	0.49	1.9	1.9	NNS	NNS
3,4-Benzofluoranthene	205-99-2	0.048	0.49	1.9	1.9	NNS	NNS
Beryllium (as Be)	7440-41-7	4 T	1,130 T	2,800 T	2,800 T	NNS	NNS
Bis (2-chloroethoxy) methane	111-91-1	NNS	NNS	NNS	NNS	NNS	NNS
Bis (2-chloroethyl) ether	111-44-4	0.03	1.4	1.3	1.3	NNS	NNS
Bis (2-chloroisopropyl) ether	108-60-1	280	174,400	56,000	56,000	NNS	NNS
Boron (as B)	7440-42-8	630 T	NNS	126,000 T	126,000 T	1000 T	NNS
Bromodichloromethane	75-27-4	TTHM	46	TTHM	28,000	NNS	NNS
p-Bromodiphenyl ether	101-55-3	NNS	NNS	NNS	NNS	NNS	NNS
Bromoform	75-25-2	TTHM	360	180	28,000	NNS	NNS
Bromomethane	74-83-9	9.8	4020	2000	2000	NNS	NNS
Butyl benzyl phthalate	85-68-7	1400	5200	280,000	280,000	NNS	NNS
Cadmium (as Cd)	7440-43-9	5 T	84 T	700 T	700 T	50 T	50 T
Carbofuran	1563-66-2	40	NNS	7,000	7,000	NNS	NNS
Carbon tetrachloride	56-23-5	5	4	11	980	NNS	NNS
Chlordane	57-74-9	2	0.002	4	700	NNS	NNS
Chlorine (total residual)	7782-50-5	700	NNS	140,000	140,000	NNS	NNS
Chlorobenzene	108-90-7	100	20,900	28,000	28,000	NNS	NNS
p-Chloro-m-cresol	59-50-7	NNS	NNS	NNS	NNS	NNS	NNS
2-Chloroethyl vinyl ether	110-75-8	NNS	NNS	NNS	NNS	NNS	NNS
Chloroform	67-66-3	TTHM	470	230	14,000	NNS	NNS
Chloromethane	74-87-3	NNS	NNS	NNS	NNS	NNS	NNS
Chloronapthalene beta	91-58-7	560	4,300	112,000	112,000	NNS	NNS

Appendix A: Numeric Water Quality Criteria Table 1. Human Health and Agricultural Designated Uses							
PARAMETER	**CAS* NUMBER**	**DWS (µg/L)**	**FC (µg/L)**	**FBC (µg/L)**	**PBC (µg/L)**	**AgI (µg/L)**	**AgL (µg/L)**
2-Chlorophenol	95-57-8	35	400	7,000	7,000	NNS	NNS
4-Chlorophenyl phenyl ether	7005-72-3	NNS	NNS	NNS	NNS	NNS	NNS
Chromium (as Cr III)	16065-83-1	10,500 T	1,010,000 T	2,100,000 T	2,100,000 T	NNS	NNS
Chromium (as Cr VI)	18540-29-9	21 T	2,000T	4,200 T	4,200 T	NNS	NNS
Chromium (Total as Cr)	7440-47-3	100 T	NNS	100 T	100 T	1000 T	1000 T
Chrysene	218-01-9	0.479	4.92	19.2	19	NNS	NNS
Copper (as Cu)	7440-50-8	1,300 T	NNS	1,300 T	1,300 T	5000 T	500 T
Cyanide	57-12-5	200 T	215,000 T	28,000 T	28,000 T	NNS	200 T
Dalapon	75-99-0	200	161,500	42,000	42,000	NNS	NNS
Dibenz (ah) anthracene	53-70-3	0.048	0.20	1.9	1.9	NNS	NNS
Dibromochloromethane	124-48-1	TTHM	34	TTHM	28,000	NNS	NNS
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	NNS	2,800	2,800	NNS	NNS
1,2-Dibromoethane (EDB)	106-93-4	0.05	NNS	0.05	0.05	NNS	NNS
Dibutyl phthalate	84-74-2	700	12,100	140,000	140,000	NNS	NNS
1,2-Dichlorobenzene	95-50-1	600	2800	126,000	126,000	NNS	NNS
1,3-Dichlorobenzene	541-73-1	NNS	NNS	NNS	NNS	NNS	NNS
1,4-Dichlorobenzene	106-46-7	75	77,500	560,000	560,000	NNS	NNS
3,3'-Dichlorobenzidine	91-94-1	0.08	0.08	3.1	3.1	NNS	NNS
p,p'-Dichlorodiphenyldichloroethane (DDD)	72-54-8	0.15	0.001	5.8	5.8	0.001	0.001
p,p'-Dichlorodiphenyldichloroethylene (DDE)	72-55-9	0.1	0.001	4.1	4.1	0.001	0.001
p,p'-Dichlorodiphenyltrichloroethane (DDT)	50-29-3	0.1	0.0006	4.1	700	0.001	0.001
1,1-Dichloroethane	75-34-3	NNS	NNS	NNS	NNS	NNS	NNS
1,2-Dichloroethane	107-06-2	5	100	15	280,000	NNS	NNS
1,1-Dichloroethylene	75-35-4	7	320	230	12,600	NNS	NNS
1,2-cis-Dichloroethylene	156-59-2	70	NNS	70	70	NNS	NNS
1,2-trans-Dichloroethylene	156-60-5	100	136,000	28,000	28,000	NNS	NNS
Dichloromethane	75-09-2	5	1600	190	84,000	NNS	NNS
2,4-Dichlorophenol	120-83-2	21	800	4,200	4,200	NNS	NNS
2,4-Dichlorophenoxyacetic acid (2,4-D)	94-75-7	70	NNS	14,000	14,000	NNS	NNS
1,2-Dichloropropane	78-87-5	5	236,000	126,000	126,000	NNS	NNS
1,3-Dichloropropene	542-75-6	2	1,700	420	420	NNS	NNS
Dieldrin	60-57-1	0.002	0.0001	0.09	70	p	p
Diethyl phthalate	84-66-2	5600	118,000	1,120,000	1,120,000	NNS	NNS
Di (2-ethylhexyl) adipate	103-23-1	400	NNS	1,200	840,000	NNS	NNS
Di (2-ethylhexyl) phthalate	117-81-7	6	7.4	100	28,000	NNS	NNS
2,4-Dimethylphenol	105-67-9	140	2300	28,000	28,000	NNS	NNS

Appendix A: Numeric Water Quality Criteria
Table 1. Human Health and Agricultural Designated Uses

PARAMETER	CAS* NUMBER	DWS (µg/L)	FC (µg/L)	FBC (µg/L)	PBC (µg/L)	AgI (µg/L)	AgL (µg/L)
Dimethyl phthalate	131-11-3	NNS	NNS	NNS	NNS	NNS	NNS
4,6-Dinitro-o-cresol	534-52-1	28	7,800	5,600	5,600	NNS	NNS
2,4-Dinitrophenol	51-28-5	14	14,400	2,800	2,800	NNS	NNS
2,4-Dinitrotoluene	121-14-2	14	5,700	2,800	2,800	NNS	NNS
2,6-Dinitrotoluene	606-20-2	0.05	NNS	2	5,600	NNS	NNS
Di-n-octyl phthalate	117-84-0	2800	NNS	560,000	560,000	NNS	NNS
Dinoseb	88-85-7	7	NNS	1,400	1,400	NNS	NNS
1,2-Diphenylhydrazine	122-66-7	0.04	0.5	1.8	1.8	NNS	NNS
Diquat	85-00-7	20	NNS	3,080	3,080	NNS	NNS
Endosulfan sulfate	1031-07-8	NNS	NNS	NNS	NNS	NNS	NNS
Endosulfan (Total)	115-29-7	42	240	8,400	8,400	NNS	NNS
Endothall	145-73-3	100	NNS	28,000	28,000	NNS	NNS
Endrin	72-20-8	2	0.8	420	420	0.004	0.004
Endrin aldehyde	7421-93-3	NNS	NNS	NNS	NNS	NNS	NNS
Ethylbenzene	100-41-4	700	28,700	140,000	140,000	NNS	NNS
Ethyl chloride	75-00-3	NNS	NNS	NNS	NNS	NNS	NNS
Fluoranthene	206-44-0	280	380	56,000	56,000	NNS	NNS
Fluorene	86-73-7	280	14,400	56,000	56,000	NNS	NNS
Fluoride	7782-41-4	4000	NNS	84,000	84,000	NNS	NNS
Glyphosate	1071-83-6	700	1,077,000	140,000	140,000	NNS	NNS
Heptachlor	76-44-8	0.4	0.0002	0.4	700	NNS	NNS
Heptachlor epoxide	1024-57-3	0.2	0.0001	0.2	18	NNS	NNS
Hexachlorobenzene	118-74-1	1	0.001	1	1,120	NNS	NNS
Hexachlorobutadiene	87-68-3	0.45	50	18	280	NNS	NNS
Hexachlorocyclohexane alpha	319-84-6	0.006	0.01	0.22	11,200	NNS	NNS
Hexachlorocyclohexane beta	319-85-7	0.02	0.02	0.78	840	NNS	NNS
Hexachlorocyclohexane delta	319-86-8	NNS	NNS	NNS	NNS	NNS	NNS
Hexachlorocyclohexane gamma (lindane)	58-89-9	0.2	25	420	420	NNS	NNS
Hexachlorocyclopentadiene	77-47-4	50	580	9,800	9,800	NNS	NNS
Hexachloroethane	67-72-1	2.5	9	100	1,400	NNS	NNS
Indeno (1,2,3-cd) pyrene	193-39-5	0.048	0.49	1.9	1.9	NNS	NNS
Isophorone	78-59-1	37	2,600	1,500	280,000	NNS	NNS
Lead (as Pb)	7439-97-1	15 T	NNS	15 T	15 T	10000 T	100 T
Manganese (as Mn)	7439-96-5	980 T	NNS	196,000 T	196,000 T	10000	NNS
Mercury (as Hg)	7439-97-6	2 T	0.6 T	420 T	420 T	NNS	10 T
Methoxychlor	72-43-5	40	NNS	7,000	7,000	NNS	NNS
Naphthalene	91-20-3	140	20,500	28,000	28,000	NNS	NNS
Nickel (as Ni)	7440-02-0	140 T	4,600 T	28,000 T	28,000 T	NNS	NNS
Nitrate (as N)	14797-55-8	10000	NNS	2,240,000	2,240,000	NNS	NNS
Nitrite (as N)	14797-65-0	1000	NNS	140,000	140,000	NNS	NNS
Nitrate/Nitrite (as Total N)		10000	NNS	NNS	NNS	NNS	NNS
Nitrobenzene	98-95-3	3.5	1,900	700	700	NNS	NNS
o-Nitrophenol	88-75-5	NNS	NNS	NNS	NNS	NNS	NNS

Appendix A: Numeric Water Quality Criteria
Table 1. Human Health and Agricultural Designated Uses

PARAMETER	CAS* NUMBER	DWS (µg/L)	FC (µg/L)	FBC (µg/L)	PBC (µg/L)	AgI (µg/L)	AgL (µg/L)
p-Nitrophenol	100-02-7	NNS	NNS	NNS	NNS	NNS	NNS
N-nitrosodimethylamine	62-75-9	0.001	8	0.03	0.03	NNS	NNS
N-nitrosodiphenylamine	86-30-6	7.1	16	290	290	NNS	NNS
N-nitrosodi-n-propylamine	621-64-7	0.005	1.4	0.2	133,000	NNS	NNS
Oxamyl	23135-22-0	200	NNS	35,000	35,000	NNS	NNS
Pentachlorophenol	87-86-5	1	1000	12	42,000	NNS	NNS
Phenanthrene	85-01-8	NNS	NNS	NNS	NNS	NNS	NNS
Phenol	108-95-2	4200	1,000	840,000	840,000	NNS	NNS
Picloram	1918-02-1	500	24,300	98,000	98,000	NNS	NNS
Polychlorinatedbiphenyls (PCBs)	1336-36-3	0.5	0.007	28	28	0.001	0.001
Pyrene	129-00-0	210	10,800	42,000	42,000	NNS	NNS
Selenium (as Se)	7782-49-2	50 T	9000 T	7,000 T	7,000 T	20 T	50 T
Silver (as Ag)	7440-22-4	35 T	107,700 T	7,000 T	7,000 T	NNS	NNS
Simazine	112-34-9	4	NNS	7,000	7,000	NNS	NNS
Styrene	100-42-5	100	NNS	280,000	280,000	NNS	NNS
Sulfides		NNS	NNS	NNS	NNS	NNS	NNS
2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)	1746-01-6	0.0000003	0.000000004	0.00009	1.4	NNS	NNS
1,1,2,2-Tetrachloroethane	79-34-5	0.17	11	7	56,000	NNS	NNS
Tetrachloroethylene	127-18-4	5	3,500	14,000	14,000	NNS	NNS
Thallium (as Tl)	7440-28-0	2 T	7.2 T	112 T	112 T	NNS	NNS
Toluene	108-88-3	1000	201,000	280,000	280,000	NNS	NNS
Toxaphene	8001-35-2	3	0.001	1.3	1400	0.005	0.005
1,2,4-Trichlorobenzene	120-82-1	70	950	14,000	14,000	NNS	NNS
1,1,1-Trichloroethane	71-55-6	200	NNS	200	200	1000	NNS
1,1,2-Trichloroethane	79-00-5	5	42	25	5,600	NNS	NNS
Trichloroethylene	79-01-6	5	203,200	280,000	280,000	NNS	NNS
2,4,6-Trichlorophenol	88-06-2	3.2	6.5	130	130	NNS	NNS
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	93-72-1	50	NNS	11,200	11,200	NNS	NNS
Trihalomethanes, Total		100	NNS	NNS	NNS	NNS	NNS
Uranium (as Ur)	7440-61-1	35 D	NNS	NNS	NNS	NNS	NNS
Vinyl chloride	75-01-4	2	13	2	4,200	NNS	NNS
Xylenes (Total)	1330-20-7	10000	NNS	2,800,000	2,800,000	NNS	NNS
Zinc (as Zn)	7440-66-6	2100 T	69,000 T	420,000 T	420,000 T	10000 T	25000 T

*Chemical Abstract System (CAS) number is a unique identification number given to each chemical.

Appendix A: Numeric Water Quality Criteria
Table 2. Aquatic & Wildlife Designated Uses

PARAMETER	CAS NUMBER	A&Wc Acute (µg/L)	A&Wc Chronic (µg/L)	A&Ww Acute (µg/L)	A&Ww Chronic (µg/L)	A&Wedw Acute (µg/L)	A&Wedw Chronic (µg/L)	A&We Acute (µg/L)
Acenaphthene	83-32-9	850	550	850	550	850	550	NNS
Acenaphthylene	208-96-8	NNS	NNS	NNS	NNS	NNS	NNS	NNS
Acrolein	107-02-8	34	30	34	30	34	30	NNS
Acrylonitrile	107-13-1	3800	250	3800	250	3800	250	NNS
Alachlor	15972-60-8	2500	170	2500	170	2500	170	NNS
Aldrin	309-00-2	2.0	NNS	2.0	NNS	2.0	NNS	4.5
Ammonia	7664-41-7	b	b	b	b	NNS	NNS	NNS
Anthracene	120-12-7	NNS	NNS	NNS	NNS	NNS	NNS	NNS
Antimony (as Sb)	7440-36-0	88 D	30 D	88 D	30 D	1000 D	600 D	NNS
Arsenic (as As)	7440-38-2	360 D	190 D	360 D	190 D	360 D	190 D	440 D
Asbestos	1332-21-4	NNS	NNS	NNS	NNS	NNS	NNS	NNS
Atrazine	1912-24-9	NNS	NNS	NNS	NNS	NNS	NNS	NNS
Barium (as Ba)	7440-39-3	NNS	NNS	NNS	NNS	NNS	NNS	NNS
Benzene	71-43-2	2700	180	2700	180	8800	560	NNS
Benzidine	92-87-5	1300	89	1300	89	1300	89	10000
Benz (a) anthracene	56-55-3	NNS	NNS	NNS	NNS	NNS	NNS	NNS
Benzo (a) pyrene	50-32-8	NNS	NNS	NNS	NNS	NNS	NNS	NNS
Benzo (ghi) perylene	191-24-2	NNS	NNS	NNS	NNS	NNS	NNS	NNS
Benzo (k) fluoranthene	207-08-9	NNS	NNS	NNS	NNS	NNS	NNS	NNS
3,4-Benzofluoranthene	205-99-2	NNS	NNS	NNS	NNS	NNS	NNS	NNS
Beryllium (as Be)	7440-41-7	65 D	5.3 D	65 D	5.3 D	65 D	5.3 D	NNS
Bis (2-chloroethoxy) methane	111-91-1	NNS	NNS	NNS	NNS	NNS	NNS	NNS
Bis (2-chlorethyl) ether	111-44-4	120000	6700	120000	6700	120000	6700	NNS
Bis (2-chloroisopropyl) ether	108-60-1	NNS	NNS	NNS	NNS	NNS	NNS	NNS
Boron (as B)	7440-42-8	NNS	NNS	NNS	NNS	NNS	NNS	NNS
Bromodichloromethane	75-27-4	NNS	NNS	NNS	NNS	NNS	NNS	NNS
p-Bromodiphenyl ether	101-55-3	180	14	180	14	180	14	NNS
Bromoform	75-25-2	15000	10000	15000	10000	15000	10000	NNS
Bromomethane	74-83-9	5500	360	5500	360	5500	360	NNS
Butyl benzyl phthalate	85-68-7	1700	130	1700	130	1700	130	NNS
Cadmium (as Cd)	7440-43-9	c D	c D	c D	c D	c D	c D	c D
Carbofuran	1563-66-2	650	50	650	50	650	50	NNS
Carbon tetrachloride	56-23-5	18000	1100	18000	1100	18000	1100	NNS
Chlordane	57-74-9	2.4	0.004	2.4	0.21	2.4	0.21	3.2
Chlorine (total residual)	7782-50-5	11	5.0	11	5.0	11	5.0	NNS
Chlorobenzene	108-90-7	3800	260	3800	260	3800	260	NNS
p-Chloro-m-cresol	59-50-7	15	4.7	15	4.7	15	4.7	48000
2-Chloroethyl vinyl ether	110-75-8	180000	9800	180000	9800	180000	9800	NNS
Chloroform	67-66-3	14000	900	14000	900	14000	900	NNS
Chloromethane	74-87-3	270000	15000	270000	15000	270000	15000	NNS
Chloronapthalene beta	91-58-7	NNS	NNS	NNS	NNS	NNS	NNS	NNS
2-Chlorophenol	95-57-8	2200	150	2200	150	2200	150	NNS
4-Chlorophenyl phenyl ether	7005-72-3	NNS	NNS	NNS	NNS	NNS	NNS	NNS
Chromium (as Cr III)	16065-83-1	d D	d D	d D	d D	d D	d D	d D
Chromium (as Cr VI)	18540-29-9	16 D	11 D	16 D	11 D	16 D	11 D	34 D
Chromium (Total as Cr)	7440-47-3	NNS	NNS	NNS	NNS	NNS	NNS	NNS
Chrysene	218-01-9	NNS	NNS	NNS	NNS	NNS	NNS	NNS
Copper (as Cu)	7440-50-8	e D	e D	e D	e D	e D	e D	e D
Cyanide	57-12-5	22 T	5.2 T	41 T	9.7 T	41 T	9.7 T	84 T
Dibenz (ah) anthracene	53-70-3	NNS	NNS	NNS	NNS	NNS	NNS	NNS
Dibromochloromethane	124-48-1	NNS	NNS	NNS	NNS	NNS	NNS	NNS

1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	NNS	NNS	NNS	NNS	NNS	NNS	NNS
1,2-Dibromoethane (EDB)	106-93-4	NNS	NNS	NNS	NNS	NNS	NNS	NNS
Dibutyl phthalate	84-74-2	470	35	470	35	470	35	1100
1,2-Dichlorobenzene	95-50-1	790	300	1200	470	1200	470	5900
1,3-Dichlorobenzene	541-73-1	2500	970	2500	970	2500	970	NNS
1,4-Dichlorobenzene	106-46-7	560	210	2000	780	2000	780	6500
3,3'-Dichlorobenzidine	91-94-1	NNS	NNS	NNS	NNS	NNS	NNS	NNS
p,p'-Dichlorodiphenyldichloroethane (DDD)	72-54-8	1.1	0.001	1.1	0.02	1.1	0.02	1.1
p,p'-Dichlorodiphenyldichloroethylene (DDE)	72-55-9	1.1	0.001	1.1	0.02	1.1	0.02	1.1
p,p'-Dichlorodiphenyltrichloroethane (DDT)	50-29-3	1.1	0.001	1.1	0.001	1.1	0.001	1.1
1,1-Dichloroethane	75-34-3	NNS	NNS	NNS	NNS	NNS	NNS	NNS
1,2-Dichloroethane	107-06-2	59000	41000	59000	41000	59000	41000	NNS
1,1-Dichloroethylene	75-35-4	15000	950	15000	950	15000	950	NNS
1,2-cis-Dichloroethylene	156-59-2	NNS	NNS	NNS	NNS	NNS	NNS	NNS
1,2-trans-Dichloroethylene	156-60-5	68000	3900	68000	3900	68000	3900	NNS
Dichloromethane	75-09-2	97000	5500	97000	5500	97000	5500	NNS
2,4-Dichlorophenol	120-83-2	1000	88	1000	88	1000	88	NNS
2,4-Dichlorophenoxyacetic acid (2,4-D)	94-75-7	NNS	NNS	NNS	NNS	NNS	NNS	NNS
1,2-Dichloropropane	78-87-5	26000	9200	26000	9200	26000	9200	NNS
1,3-Dichloropropene	542-75-6	3000	1100	3000	1100	3000	1100	NNS
Dieldrin	60-57-1	2.5	0.002	2.5	0.002	2.5	0.005	4
Diethyl phthalate	84-66-2	26000	1600	26000	1600	26000	1600	NNS
Di(2-ethylhexyl) phthalate	117-81-7	400	360	400	360	400	360	3100
2,4-Dimethylphenol	105-67-9	1000	310	1000	310	1100	310	150000
Dimethyl phthalate	131-11-3	17000	1000	17000	1000	17000	1000	NNS
4,6-Dinitro-o-cresol	534-52-1	310	24	310	24	310	24	NNS
2,4-Dinitrophenol	51-28-5	110	9.2	110	9.2	110	9.2	NNS
2,4-Dinitrotoluene	121-14-2	14000	860	14000	860	14000	860	NNS
2,6-Dinitrotoluene	606-20-2	NNS	NNS	NNS	NNS	NNS	NNS	NNS
-Di-n-octyl phthalate	117-84-0	NNS	NNS	NNS	NNS	NNS	NNS	NNS
1,2-Diphenylhydrazine	122-66-7	130	11	130	11	130	11	NNS
Endosulfan sulfate	1031-07-8	0.22	0.06	0.22	0.06	0.22	0.06	3.0
Endosulfan (Total)	115-29-7	0.22	0.06	0.22	0.06	0.22	0.06	3.0
Endrin	72-20-8	0.18	0.002	0.2	0.08	0.2	0.08	0.7
Endrin aldehyde	7421-93-3	0.18	0.002	0.2	0.08	0.2	0.08	0.7
Ethylbenzene	100-41-4	23000	1400	23000	1400	23000	1400	NNS
Ethyl chloride	75-00-3	NNS	NNS	NNS	NNS	NNS	NNS	NNS
Fluoranthene	206-44-0	2000	1600	2000	1600	2000	1600	NNS
Fluorene	86-73-7	NNS	NNS	NNS	NNS	NNS	NNS	NNS
Fluorine	7782-41-4	NNS	NNS	NNS	NNS	NNS	NNS	NNS
Heptachlor	76-44-8	0.52	0.004	0.52	0.004	0.58	0.013	0.9
Heptachlor epoxide	1024-57-3	0.52	0.004	0.52	0.004	0.58	0.013	0.9
Hexachlorobenzene	118-74-1	6.0	3.7	NNS	NNS	NNS	NNS	NNS
Hexachlorobutadiene	87-68-3	45	8.2	45	8.2	45	8.2	NNS
Hexachlorocyclohexane alpha	319-84-6	1600	130	1600	130	1600	130	1600
Hexachlorocyclohexane beta	319-85-7	1600	130	1600	130	1600	130	1600
Hexachlorocyclohexane delta	319-86-8	1600	130	1600	130	1600	130	1600
Hexachlorocyclohexane gamma (lindane)	58-89-9	2.0	0.08	3.4	0.28	7.6	0.61	11

Appendix C – Documents Reviewed

Appendix C – Documents Reviewed

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May 13, 2008

The Honorable Don Stapley
Maricopa County Board of Supervisors
301 West Jefferson Street, 10th Floor
Phoenix, AZ 85003

Dear Supervisor Stapley:

Thank you for your May 8, 2008 letter regarding the memorandum discussing my reasoning in postponing the Small Plant Review and Approval for the Preserve at Goldfield Ranch Water Reclamation Facility for one month until the May 28, 2008 Regional Council meeting. In your letter, you expressed concern with the postponement and the interpretation of the weighted voting procedure by MAG Special Counsel. I would like to take this opportunity to provide an update regarding the activities underway on the project and clarification of the MAG weighted voting procedure.

Since the transmittal of the memorandum, the Salt River Pima-Maricopa Indian Community (SRPMIC) has hired an independent consultant to investigate the information brought forward by the Salt River Project. The SRPMIC indicated that they will provide the report to MAG by May 15, 2008. In addition, the Chair of the MAG Water Quality Advisory Committee has requested that a meeting of the Committee be scheduled for May 22, 2008. This timing will enable the report to be mailed to the Water Quality Advisory Committee in their agenda packet for the meeting.

Regarding setting of the agenda, the MAG Bylaws, Article V, Section 3, provides that meetings of the Regional Council are called by the Chair and notice of such meetings shall be given by the Secretary, specifying the time, place and general purpose of the meeting. The practice at MAG has been for the Chair of the Regional Council to approve agendas before they are sent to the members.

Regarding the issue of having the Water Quality Advisory Committee review the information, I believe it is contemplated in the MAG 208 Water Quality Management Plan that issues be thoroughly reviewed before proposed facilities are considered by the Regional Council for action. If new information is developed, I believe it is appropriate that our technical committee that was established for that purpose review the information before Regional Council action is taken.

Regarding weighted voting, the Bylaws were interpreted by the MAG Special Counsel at the April 23, 2008 Regional Council meeting. Since the meeting, our Special Counsel has reviewed all material related to the weighted vote provision and the intent of the Regional Council when it was adopted. The interpretation provided at the April 23, 2008 meeting correctly follows the Bylaws. We have also

reviewed the August 22, 2007 Regional Council minutes where a weighted vote was taken. It was consistent with the interpretation of the Bylaws that was provided at the April 23, 2008 Regional Council meeting.

Regarding the technical water issues you have raised, we will forward your comments to the MAG Water Quality Advisory Committee.

As I stated in my April 28, 2008 memorandum, I am confident a decision can be reached at the May Regional Council meeting.

Sincerely,

James M. Cavanaugh
Chair, MAG Regional Council
Mayor of Goodyear

cc: MAG Regional Council

Maricopa County

DON STAPLEY
Board of Supervisors, District 2

301 West Jefferson Street
10th Floor
Phoenix, AZ 85003-2143
Phone: 602-506-7431
Fax: 602-506-6362
www.maricopa.gov

May 8, 2008

Mayor James Cavanaugh, City of Goodyear
190 North Litchfield Road
PO Box 5100
Goodyear, Arizona 85338

Mr. Dennis Smith, Executive Director
Maricopa Association of Governments
302 North First Avenue, Suite 300
Phoenix, Arizona 85003

RE: MAG 208 Small Plant Review and Approval for the Proposed Preserve at Goldfield Ranch Water Reclamation Facility

Dear Mayor Cavanaugh and Mr. Smith:

I am in receipt of your memorandum dated April 28, 2008 explaining your unilateral decision to continue the matter of the Small Plant Review for the wastewater reclamation facility at the Preserve at Goldfield Ranch. After reading your memorandum, I felt it appropriate to provide a response to you, Mr. Dennis Smith, and each member of the MAG Regional Council.

CHAIRMANS ACTIONS

As stated on the record at the April 23rd MAG Regional Council hearing, I believe your decision to remove an application from the agenda was unwarranted and set a dangerous precedent.

Although there were numerous conversations related to the matter being placed on the agenda, it was withheld by your action alone, claiming a right to control the content of the agenda, without consideration of the other members of the Regional Council. Despite several letters requesting that this matter be put back on the agenda, including those from Phoenix, Chandler, Glendale and Maricopa County, you chose to disregard the request of the other MAG Regional Council members.

As we advised you in previous correspondence, we have thoroughly reviewed MAG by-laws and have not found any provisions that would allow the Chairman of the Regional Council to unilaterally remove items from an agenda or to keep items off an agenda. In addition, Robert's Rules of Order, while not adopted by MAG, are widely considered to be authoritative in matters of parliamentary procedure. According to RONR (10th ed.) p. 360, l.

10-35 agendas are to be adopted by the body and cannot be changed except by a two thirds majority vote.

This same logic is applicable to your decision and rumored plan to send the subject application back to the Water Quality Advisory Committee. I am unaware of any authority to make such a determination. In the very least, a Regional Council hearing should be called immediately and any request to send this back to the Water Quality Advisory Committee should be considered by the entire Council. Failure to obtain the Council's consideration violates due process.

WEIGHTED VOTING

We vehemently disagree with how MAG's Counsel has interpreted the effect of weighted voting. The interpretation provided at the hearing (based in part on a pamphlet not officially adopted by the Regional Council, yet appearing on MAG's website) requires an applicant to have both a numeric vote and the weighted vote. Such an interpretation of this section simply does not make sense. If an applicant has the numeric vote, then why would they need a weighted vote? If your answer is that the weighted vote is only intended to be a "blocking measure" then the business of MAG could be stalled entirely. Moreover, communities contribute to MAG on a weighted basis. If a weighted vote is as meaningless as your counsel has interpreted it to be, then those "weighted" communities would be well served to reduce their weighted contributions equal to the one vote they are receiving.

Please provide us with your written interpretation as to how the weighted voting is applied. Additionally, please provide us with all past examples of how it has been applied. If, upon further review, you conclude that MAG's counsel erred in this hasty interpretation, please immediately reschedule the April 23rd Regional Council hearing.

WATER QUALITY

In the statement you read into the record on April 23rd and in your memorandum dated April 28th, your purported reason for this decision is out of concern that the playa deposit may not underlay the entire basin. However, it should be recognized that the underlying geology of the site, and indeed the entire basin, is not a matter subjected to MAG's planning review of this small package plant. The relevant issue to be considered by MAG is whether the effluent will be treated to A+ levels thereby meeting the safe drinking water standards established by ADEQ and other agencies that properly have jurisdiction over the engineering of this small package plant. The subject application includes numerous assurances that effluent will be treated to A+ levels, and the reuse and recharge proposed is compliant with

the standard established by MAG in all previous environmental planning it has undertaken to date. As stewards of Water Quality for this region, we should be rewarding this plan for its commitment to achieve Safe Yield (a requirement of State law) and not thwarting it.

The findings of any report produced by any independent geological consultant related to the extent of the existence of the Pemberton Clays, or the subject playa deposit, are not at issue here. According to the 208 Amendment Application, the playa deposit is not proposed as the barrier between the recharge and the claim from the SRPMIC that such a recharge may introduce pollutants into their aquifer. The "barrier" is simply the A+ drinking water standards imposed by ADEQ. In very simple terms, the recharge of A+ effluent will result in a clean plume of water into the aquifer. This is undeniable and not disputed by any scientific body recognized by ADEQ.

CONCLUSION

If a matter is to be considered by MAG, it should be considered exclusively on its merits and within the charter intent of MAG. Further, it should be considered by the entire body.

As a Member Agency, we would expect that an application we are sponsoring be treated consistently with all other applications that are heard by the Regional Council. For MAG to operate effectively as the volunteer association of governments, it must follow its' by-laws, adopted criteria, and avoid the appearance of impropriety, favoritism or unequal treatment.

To remedy this situation, a Regional Council hearing should be scheduled immediately to consider the subject application on its merits and within the authority of this body. Anything else, such as subjecting the application to an unprecedented MAG engineering review, would intrude upon matters that are legally and properly best left to ADWR and ADEQ under Section 208 of the Clean Water Act.

Sincerely,

Don Stapley

Cc: MAG Regional Council members

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April 28, 2008

TO: Members of the MAG Regional Council

FROM: Mayor James M. Cavanaugh, Goodyear, Chair

SUBJECT: DECISION REGARDING PLACING THE GOLDFIELD RANCH WATER RECLAMATION FACILITY ON THE MAG REGIONAL COUNCIL AGENDA

At the April 23, 2008 MAG Regional Council meeting, there was a lengthy discussion regarding whether to proceed with the items on the agenda. It was requested that the majority of the agenda not proceed until the Small Plant Review and Approval for the Preserve at Goldfield Ranch Water Reclamation Facility be placed on a MAG Regional Council agenda for a vote. As the MAG attorney indicated at the meeting, this item was not on the agenda and therefore, I was unable to discuss the rationale for not including it. At this time, I would like to discuss my reasoning in postponing this item for one month until the May 28, 2008 Regional Council meeting.

As the Regional Council agenda was being drafted, I was approached by the President of the Salt River Pima-Maricopa Indian Community (SRPMIC) requesting a one-month delay to provide them an opportunity to hire a consultant to further study this matter. They were rightly concerned regarding a recent letter from the Salt River Project (SRP) regarding the facility.

The SRP letter, dated April 8, 2008, indicated that SRP had reviewed the applicant's hydrology report used to support its Application of Analysis of Assured Water Supply, a report by Skotnicki and others (Arizona Geological Survey) and the geologic logs of 16 wells in the vicinity of the Preserve. It was SRP's opinion that the playa deposit does not underlie the entire basin, or the entire property in question. The Salt River Project then concluded that the applicant's argument that the playa forms a barrier was flawed, and that there was a hydraulic connection between the aquifer and the subflow of the Verde River.

The SRPMIC assured me that they would quickly hire an independent consultant to investigate the information brought forward by SRP and report back to the Regional Council in May. I also believed it would be important for their study to be reviewed by members of the MAG Water Quality Advisory Committee prior to the May Regional Council meeting.

The decision to postpone the item was made after careful consideration. There were very close votes by the MAG Water Quality Advisory Committee and MAG Management Committee on the facility. Based on the SRP letter and the close votes preceding the Regional Council, it was clear the subject matter was rife with uncertainty which could not be fully resolved before the April 23 Regional Council meeting. However, the uncertainty could be reduced, if not eliminated, in time for the May meeting after

we reviewed the report by the consultant hired by SRPMIC. Hence, postponement seemed appropriate action to me. Furthermore, I believed that it was important to show respect for the leadership of a Community concerned about the quality of drinking water for its citizenry.

After deciding not to place the item on the agenda and prior to the April 23, 2008 MAG Regional Council meeting, I received letters from three cities and Maricopa County requesting that the Small Plant Review and Approval for the Preserve at Goldfield Ranch Water Reclamation Facility be placed on the meeting agenda. A written response was then provided to each of these entities indicating the rationale for postponing the item until the May 28, 2008 MAG Regional Council meeting.

It is important to add that the attorney for the Goldfield Preserve requested that I make a statement at the beginning of the April 23, 2008 MAG Regional Council meeting and I honored that request. At the meeting, I requested that any issues the MAG Regional Council members may have regarding the item be provided to MAG staff. I indicated that the issues will also be provided to the Goldfield Preserve representatives so they can be thoroughly investigated and there can be a productive discussion and decision reached at the May 28, 2008 MAG Regional Council meeting. My comments resulted from a specific request by the Goldfield Preserve attorney and were coordinated with him.

As a result of this postponement, I believe that the members of the Regional Council will have ample opportunity to thoroughly consider the Goldfield Preserve application. I am confident a decision can be reached at the May Regional Council meeting.

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April 23, 2008

The Honorable Boyd Dunn
City of Chandler
PO Box 4008 MS603
Chandler, AZ 85244-4008

Dear Mayor Dunn:

Thank you for your April 22, 2008 letter regarding the Small Plant Review and Approval for the Preserve at Goldfield Ranch Water Reclamation Facility. The Salt River Pima-Maricopa Indian Community (SRPMIC) has requested that voting on the project be delayed due to the seriousness of the matter and new information provided by the Salt River Project with regard to the clay layer analysis. To accommodate the SRPMIC, the item has been postponed for one month and will be heard at the May 28, 2008 MAG Regional Council meeting.

The decision to continue the item was made after careful consideration. There were close votes by the MAG Water Quality Advisory Committee and MAG Management Committee on the facility. In addition, MAG received a letter from Salt River Project dated April 8, 2008. Salt River Project concluded that the applicant's argument that the playa forms a barrier is flawed, and that there is a hydraulic connection between the aquifer and the subflow of the Verde River. The SRPMIC has requested a one month delay to provide an opportunity for them to hire a consultant to further study this matter. It is important that the consultant study be reviewed by the MAG Water Quality Advisory Committee. MAG is in the process of scheduling a Committee meeting to review the information prior to the May 28, 2008 MAG Regional Council meeting.

Again, thank you for your letter and interest in the MAG 208 Water Quality Management Plan process. If you have any questions, please do not hesitate to contact me at (623) 882-7775.

Sincerely,

James M. Cavanaugh
Chair, MAG Regional Council
Mayor of Goodyear

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April 21, 2008

The Honorable Elaine Scruggs
City of Glendale
5850 W. Glendale Avenue
Glendale, AZ 85301

Dear Mayor Scruggs:

Thank you for your April 18, 2008 letter regarding the Small Plant Review and Approval for the Preserve at Goldfield Ranch Water Reclamation Facility. The Salt River Pima-Maricopa Indian Community (SRPMIC) has requested that voting on the project be delayed due to the seriousness of the matter and new information provided by the Salt River Project with regard to the clay layer analysis. To accommodate the SRPMIC, the item has been postponed for one month and will be heard at the May 28, 2008 MAG Regional Council meeting.

The decision to continue the item was made after careful consideration. There were close votes by the MAG Water Quality Advisory Committee and MAG Management Committee on the facility. In addition, MAG received a letter from Salt River Project dated April 8, 2008. Salt River Project concluded that the applicant's argument that the playa forms a barrier is flawed, and that there is a hydraulic connection between the aquifer and the subflow of the Verde River. The SRPMIC has requested a one month delay to provide an opportunity for them to hire a consultant to further study this matter. It is important that the consultant study be reviewed by the MAG Water Quality Advisory Committee. MAG is in the process of scheduling a Committee meeting to review the information prior to the May 28, 2008 MAG Regional Council meeting.

Again, thank you for your letter and interest in the MAG 208 Water Quality Management Plan process. If you have any questions, please do not hesitate to contact me at (623) 882-7775.

Sincerely,

James M. Cavanaugh
Chair, MAG Regional Council
Mayor of Goodyear

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April 21, 2008

The Honorable Don Stapley
Maricopa County Board of Supervisors
301 W. Jefferson, 10th Floor
Phoenix, AZ 85003-2148

Dear Supervisor Stapley:

Thank you for your April 18, 2008 letter regarding the Small Plant Review and Approval for the Preserve at Goldfield Ranch Water Reclamation Facility. The Salt River Pima-Maricopa Indian Community (SRPMIC) has requested that voting on the project be delayed due to the seriousness of the matter and new information provided by the Salt River Project with regard to the clay layer analysis. To accommodate the SRPMIC, the item has been postponed for one month and will be heard at the May 28, 2008 MAG Regional Council meeting.

The decision to continue the item was made after careful consideration. There were close votes by the MAG Water Quality Advisory Committee and MAG Management Committee on the facility. In addition, MAG received a letter from Salt River Project dated April 8, 2008. Salt River Project concluded that the applicant's argument that the playa forms a barrier is flawed, and that there is a hydraulic connection between the aquifer and the subflow of the Verde River. The SRPMIC has requested a one month delay to provide an opportunity for them to hire a consultant to further study this matter. It is important that the consultant study be reviewed by the MAG Water Quality Advisory Committee. MAG is in the process of scheduling a Committee meeting to review the information prior to the May 28, 2008 MAG Regional Council meeting.

Again, thank you for your letter and interest in the MAG 208 Water Quality Management Plan process. If you have any questions, please do not hesitate to contact me at (623) 882-7775.

Sincerely,

James M. Cavanaugh
Chair, MAG Regional Council
Mayor of Goodyear

c: Joy Rich

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April 21, 2008

The Honorable Phil Gordon
City of Phoenix
200 W. Washington, 11th Floor
Phoenix, AZ 85003

Dear Mayor Gordon:

Thank you for your April 16, 2008 letter regarding the Small Plant Review and Approval for the Preserve at Goldfield Ranch Water Reclamation Facility. The Salt River Pima-Maricopa Indian Community (SRPMIC) has requested that voting on the project be delayed due to the seriousness of the matter and new information provided by the Salt River Project with regard to the clay layer analysis. To accommodate the SRPMIC, the item has been postponed for one month and will be heard at the May 28, 2008 MAG Regional Council meeting.

The decision to continue the item was made after careful consideration. There were close votes by the MAG Water Quality Advisory Committee and MAG Management Committee on the facility. In addition, MAG received a letter from Salt River Project dated April 8, 2008. Salt River Project concluded that the applicant's argument that the playa forms a barrier is flawed, and that there is a hydraulic connection between the aquifer and the subflow of the Verde River. The SRPMIC has requested a one month delay to provide an opportunity for them to hire a consultant to further study this matter. It is important that the consultant study be reviewed by the MAG Water Quality Advisory Committee. MAG is in the process of scheduling a Committee meeting to review the information prior to the May 28, 2008 MAG Regional Council meeting.

Again, thank you for your letter and interest in the MAG 208 Water Quality Management Plan process. If you have any questions, please do not hesitate to contact me at (623) 882-7775.

Sincerely,

James M. Cavanaugh
Chair, MAG Regional Council
Mayor of Goodyear

Chandler · Arizona
Where Values Make The Difference

Boyd W. Dunn
Mayor

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Chandler, Arizona 85225

April 22, 2008

Honorable James Cavanaugh
City of Goodyear
P.O. Box 5100
190 North Litchfield Road
Goodyear, AZ 85338

Dear Mayor Cavanaugh:

Please accept this letter as my request to add the MAG 208 Small Plant Review regarding the Goldfield Ranch Water Reclamation Facility to the April 23, 2008 MAG Regional Council agenda.

Thank you for your consideration.

Sincerely,

Boyd W. Dunn
Mayor

cc: Dennis Smith, Executive Director,
Maricopa Association of Governments

ELAINE M. SCRUGGS
Mayor

April 18, 2008

Mayor Jim Cavanaugh
Chairman, MAG Regional Council
Maricopa Association of Governments
302 N. 1st Avenue, Suite 300
Phoenix, AZ 85003

Re: Small Plant Review
Preserve at Goldfield Ranch

Dear Mayor Cavanaugh:

It has come to my attention that the matter scheduled for MAG Regional Council review on April 23 has been removed from the agenda for an undetermined period of time.

As you are aware, this matter has been approved by both the MAG 208 technical committee (Water Advisory Committee) and the MAG Management Committee. Our assigned role as Regional Council members is to ratify the MAG 208 technical committee's recommendation that a sewer treatment plant complies with the Clean Water Act (section 208) and the region's capacity for sewer service.

The applicant has stated on the record at both the Water Advisory Committee and the Management Committee that additional studies related specifically to water quality and the feasibility of the proposed recharge systems will be produced in the normal course of planning. Further, these studies are required by ADEQ and ADWR as part of the public hearing process related to the Aquifer Protection permit and Underground Storage Facility permit process.

Please accept this letter as a request to put this matter back on the agenda for the MAG Regional Council's April 23, 2008 meeting.

Very truly yours,

Elaine M. Scruggs
Mayor

Cc: Supervisor Don Stapley, Maricopa County Board of Supervisors
Dennis Smith, Executive Director, Maricopa Association of Governments

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Maricopa County

DON STAPLEY
Board of Supervisors, District 2

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April 18, 2008

Mayor James Cavanaugh, City of Goodyear
190 North Litchfield Road
PO Box 5100
Goodyear, Arizona 85338

Mr. Dennis Smith, Executive Director
Maricopa Association of Governments
302 North First Avenue, Suite 300
Phoenix, AZ 85003

RE: MAG 208 Small Plant Review and Approval for the Proposed Preserve at Goldfield Ranch Water Reclamation Facility

Dear Mayor Cavanaugh and Mr. Smith:

It has come to our attention that the MAG 208 Small Plant Review and Approval for the Proposed Preserve at Goldfield Ranch Water Reclamation Facility, an item scheduled to be placed before the Maricopa Association of Governments (MAG) Regional Council, was removed from the agenda by the Chairman of the Regional Council.

We have reviewed the MAG by-laws and have not found any provision that would allow the Chairman of the Regional Council to unilaterally remove items from an agenda or to keep items off of an agenda. In addition, Robert's Rules of Order, while not adopted by MAG, are widely considered to be authoritative in matters of parliamentary procedure. According to RONR (10^{th} ed.) p. 360, l. 10-35 agendas are to be adopted by the body and cannot be changed except by a two thirds majority vote.

For the above stated reasons, we respectfully encourage you to place this matter back on the April 23, 2008, Regional Council agenda.

Sincerely,

Don Stapley, District 2 Supervisor
Maricopa County Board of Supervisors

Joy Rich
Assistant County Manager

City of Phoenix
OFFICE OF THE MAYOR

MAYOR PHIL GORDON

April 16, 2008

Honorable James Cavanaugh
City of Goodyear
P.O. Box 5100
190 N. Litchfield Road
Goodyear, AZ 85338

Dear Mayor Cavanaugh:

I respectfully request that you add the Draft MAG 208 Small Plant Review and the Proposed Preserve at Goldfield Ranch Water Reclamation Facility to the April 23, 2008, MAG Regional Council Agenda.

Thank you in advance for your consideration.

Sincerely,

Phil Gordon

Phil Gordon
Mayor

Fort McDowell Yavapai Nation

Office of the General Manager

P.O. Box 17779, Fountain Hills, AZ 85269 Phone (480) 837-7146 Fax (480) 816-0294

General Manager Phillip Dorchester Executive Assistant Yvonne Davis Events/Tourism Manager Rory Majenty
Government Relations Director Carole Klopatek

April 21, 2008

Mr. Dennis Smith
MAG Executive Director
Maricopa County Association of Governments
302 N. 1st. Ave., Suite 300
Phoenix, Arizona 85003

Dear Mr. Smith:

Fort McDowell Yavapai Nation's Tribal Council has asked that I communicate to you their official position regarding the MAG 208 Wastewater treatment plant for the Goldfield Preserve project. Please refer to the enclosed letter to Mr. Steve Ellman, owner of the Preserve at Goldfield Ranch project, stating that the Nation's official position is opposed to this 208 amendment.

Tribal Council did a full review of the proposed wastewater treatment plant. At the end of this session, Council unanimously concluded that there are too many unresolved issues regarding the plant. These issues include, but are not limited to, lack of information on the proposed facility, feasibility of injection wells, sludge management, impacts on the Nation, impacts to the Verde River, impacts to other water sources, as well as financial.

I hope this letter clears up any misconception of the Nation's official position.

Sincerely,

Phil Dorchester
General Manager

cc: Fort McDowell Yavapai Nation Tribal Council
Drew Ryce, General Counsel, FMYN
Dr. Carole Klopatek, Director of Government Relations

Fort McDowell Yavapai Nation

P.O. Box 17779, Fountain Hills, AZ 85269 Phone (480) 837-5121 Fax (480) 837-1630

President Dr. Clinton Pattea Vice President Bernadine Burnette Treasurer Pamela Mott
Council Member Paul Russell Council Member Ruben Balderas Council Secretary Pansy Thomas

April 17, 2008

Mr. Steve Ellman
Ellman Holdings
2850 E. Camelback Road, Suite 110
Phoenix, Arizona 85016

Dear Mr. Ellman:

This letter is in regard to the Goldfield Ranch MAG 208 WASTEWATER TREATMENT PLANT for the Preserve at Goldfield Ranch. As you are aware, I have not been involved in the Goldfield Preserve as I only came into office in mid February. Thus, I appreciated you meeting with me and thank you for sharing your thoughts about the project, specifically in regard to the wastewater plant.

In my letter of April 15, I indicated that my initial reaction to this development was to discuss potentially mutually beneficial projects, the wastewater facility as being one. As clearly indicated to you, my position was not the official position of the Nation but that of a conversation between interested parties. However, our continued communication assumed that there were no outstanding environmental issues regarding the wastewater plant or that the Nation's water resources would not be harmed in any way. I also mentioned to you since I was not aware of all details of this project, I promised I would meet with Tribal Council to discuss the pros and the cons before April 23rd. Today, I have met with Council and we have gone over, in great detail, the proposed wastewater treatment plant. We carefully examined the extent of the project and the potential harm that could come to the Nation and the surrounding communities should this MAG 208 wastewater plant amendment move forward. The Council unanimously concluded that there are too many unresolved issues to provide you with the support you need to move forward. This is the Nation's official position. As I understand, these issues have been brought to your attention numerous times. I realize you may be disappointed by our decision. However, you must understand, as elected officials, Tribal Council serves the people of Fort McDowell Yavapai Nation and we must take all points into consideration in our evaluation process.

If you have any further information regarding this development, please feel free to submit this information to the Nation in writing.

Again, it was pleasure speaking with you.

Respectfully,

Dr. Clinton M. Pattea

Clinton Pattea
President

cc: Tribal Council
Phil Dorchester, GM, FMYN
Supervisor Stapley
MAG

SALT RIVER

PIMA-MARICOPA INDIAN COMMUNITY

10005 East Osborn Road / Scottsdale, Arizona 85256-9722 Phone (480) 362-7400/Fax (480) 362-7593

April 15, 2008

Chairperson James M. Cavanaugh
Regional Council
Maricopa County Association of Governments
City of Goodyear
190 North Litchfield Road
Goodyear, Arizona 85338

Dear Chairperson Cavanaugh,

I'm writing in reference to the April 11, 2008 letter I sent to you regarding our position on the Preserve at Goldfield Ranch 208 Application. Due to the seriousness of this matter and the new information submitted by the Salt River Project (SRP) relative to the clay layer analysis, I am requesting a delay on the Goldfield 208 application vote scheduled on April 23, 2008 in order to request further study of this matter. The Salt River Project letter is dated April 8, 2008 and was not available for review by the MAG Water Quality Advisory Committee. It was sent to MAG Management Committee members two hours before their vote. As such, more time will allow for careful review of the scientific data.

On behalf of the Salt River Pima-Maricopa Indian Community we request you oppose the Goldfield 208 application. I thank you for your careful consideration of the request.

Sincerely,

Diane Enos
President

SALT RIVER

PIMA-MARICOPA INDIAN COMMUNITY

10005 East Osborn Road / Scottsdale, Arizona 85256-9722 / Phone (480) 362-7400 / Fax (480) 362-7593

April 11, 2008

Chairperson James M. Cavanaugh
Regional Council
Maricopa County Association of Governments
302 North 1st Avenue, Suite 300
Phoenix, Arizona 85003

Dear Chairperson Cavanaugh,

The Salt River Pima-Maricopa Indian Community (SRPMIC) has appreciated the opportunity to participate in the MAG process in regards to the Goldfield Ranch 208 Application. SRPMIC has a long history of working successfully with various local governments including the cities of Scottsdale, Tempe, Mesa and Phoenix on a variety of complex issues. As with all governments, our number one priority is to protect the health and well being of our citizens and eco-system. Therefore, at this time we must continue to object to The Preserve at Goldfield Ranch 208 application for the reasons below.

QUICK TIMELINE

Thursday, March 20th the MAG Water Quality Advisory Committee voted 9-7 to approve the Preserve at Goldfield Ranch 208 Application.

Wednesday, April 9th the MAG Management Committee voted 15-13 to approve the Preserve at Goldfield Ranch 208 Application.

Salt River Pima Maricopa Indian Community Concerns

This area of proposed development, unlike most 208 applications, has a very unique and delicate ecosystem. The last few miles of the Verde River flows within SRPMIC boundaries and the Verde River's confluences with the Salt River are also located within the Community.
SRPMIC still has a range of concerns with the Goldfield Ranch application: water quality impacts to the northeast corner of our Community, overall water supply safety and the protection of the Desert Nesting Bald Eagle which was recently placed back on the Endangered Species List to list a few.

SCIENCE:

One area of key concern is the variance in the science between the Developer, the Community and Salt River Project (SRP). SRPMIC still does not have adequate data from the developer to substantiate the extent and integrity of the confining clay layer. The cross-sections provided in the Goldfield 208 Application identifies 8 wells with only 5 wells penetrating through the clay layer. This does not provide necessary data to verify the extent or integrity of the clay layer, which may impact the Verde River. Information such as this is critical, as without substantiated evidence of clay layer confining the aquifer proposed for use by Goldfield, water quality and quantity are at risk.

SRP, who has a great deal of experience in the area, disagrees with the developer's analysis of the clay layer. SRP's analysis concurs with what our internal and external experts have stated, that the effluent usage plan is not adequate.

Along, with the continued concern about clay layer, the Community is gravely concerned about the future health of its drinking wells, permanent riparian habitat and the continued well-being of Endangered Desert Nesting Bald. The treated wastewater contaminants could have a detrimental impact water use for human consumption and on the fish that eagles depend on for forage.

The Community contends a fundamental part of the 208 planning process is to address water quality issues. The developer has not conducted the necessary studies that would address this essential part of the 208 planning process.

The inadequacies of the Goldfield Ranch Plan must be raised: there are inadequate protections for a system failure including lack of proper emergency plans and back-up plans that address cost.

"NOT IN MY BACKYARD."

The Salt River Pima Maricopa Indian Community's history represents a commitment to work through challenges with our government neighbors and private development. Representatives from Scottsdale, Tempe, Mesa and Phoenix can attest to several of our cooperative ventures. Again, like others we have a fiduciary responsibility to protect our people who utilize our lands and wells. Currently, these wells are in the direct flow pattern of the proposed 208 recharge area as is our permanent habitat preserve, which includes nesting sites for the endangered Desert Bald Eagles causing us to continue to oppose this application until the Community's concerns can be addressed in a scientifically sound manner that ensures the safety of our citizens and eco-system.

With great appreciation for the task you have at hand, we ask that you reject this proposal.

Sincerely,

Diane Enos
President

Maricopa County
Environmental Services
Water and Waste Management Division

1001 N. Central Ave., Suite 150
Phoenix, AZ 85004
Phone: (602) 506-6666
Fax: (602) 506-6925
TDD: 602 506 6704
www.maricopa.gov/envsvc

April 7, 2008

Kathy Haines, President
Goldfield Concerned Citizens Association
12140 N. Sin Vacas Trail
Ft. McDowell, AZ 85264

Dear Ms. Haines:

I received your letter dated March 20, 2008, regarding the Amendment to the MAG 208 Water Quality Management Plan to incorporate the proposed water reclamation facility for the Preserve at Goldfield Ranch.

In your section 1, you state that the application fails to consider all relevant adjacent parcels. The application envisions phased construction of a 400,000 gallon per day capacity wastewater treatment plant. Flows from the developed parcels are estimated at 354,000 gallons per day, and estimated flows from adjacent parcels to the east are 12,000 gallons per day. As you mention, the surrounding land is rural in nature and zoned for minimum lot sizes of 4.36 acres; the large lot size would make connection to the proposed treatment plant infeasible when compared to the cost of onsite wastewater treatment options.

If the owner of any parcel outside the planned Goldfield Ranch service area desires to rezone to a density that requires offsite sewage treatment, the owner could explore the feasibility of connecting to the treatment plant. As stated in the application, "at the expense of the private landowner, the wastewater collection system may be able to be expanded to provide service outside the planned service area." However, your statement "that Maricopa County has already determined that it is feasible to serve all of the south side of the Beeline Highway with this wastewater plant" is incorrect. Although the 1995 development master plant (DMP) designated 18 acres in the area for potential commercial zoning, the land is currently zoned for rural development. During the subject 208 Amendment process, no landowner in the area has stated a desire to be included in the small wastewater plant service area.

Section 2 of your letter concerns the requirement to determine reactions of nearby landowners to the proposed facility. This question in Table 4-53, Small Plant Criteria, is under the heading "Will the proposed plant adversely impact existing or approved nearby land uses?" The Fort McDowell Yavapai Nation (Nation) owns the land immediately to the west of the proposed water reclamation facility. The developer has records of numerous meetings and correspondence with the Nation and other interested groups during the process of preparing and presenting the 208 Plan Amendment. Included in the file is a sign in sheet for a December 2006 meeting regarding the DMP for the Preserve

at Goldfield Ranch, where the Maricopa County Environmental Services Department explained the MAG 208 plan amendment requirements for the wastewater treatment facility. You and Randy Haines signed in at that meeting. The County also has a record of meetings and correspondence between the developer and Goldfield Ranch Homeowners' Association that include questions and answers regarding wastewater treatment plans for the project. The technical issues you mention in section 2 of your letter were addressed by the developer in their 208 Plan Amendment.

Section 3 of your letter contends that the project will discharge into the waters of the United States. This is incorrect. The application states that the wastewater plant will treat effluent to ADEQ A+ standards, with effluent used for irrigation to the maximum extent feasible. Effluent will also be used for recharge into the aquifer. Maricopa County requires demonstration of technical feasibility of reuse/recharge of effluent prior to design approval for a wastewater treatment plant. The 208 Amendment does not permit direct discharge to surface water.

Thank you for commenting on the MAG 208 Water Quality Management Plan to incorporate the proposed water reclamation facility for the Preserve at Goldfield Ranch into the MAG 208 Area wide Water Quality Management Plan. You have many concerns that may be appropriate to address elsewhere in the development review process. However, based on the above analysis of the information provided by you and the applicant, the Department has determined that the MAG 208 Amendment is acceptable and complies with the MAG 208 Area wide Water Quality Management Plan.

Please note that the Department has not reviewed, nor approved, the design of the facilities as part of the 208 Small Projects Review. Any technical issues that remain will need to be resolved during the design phase of the project. Approval to Construct (ATC) and Approval of Construction (AOC) must be obtained from this Department prior to start of construction and startup, respectively, of all treatment, discharge, recharge, and reuse facilities, including all conveyance facilities and final end user facilities.

Sincerely,

Kevin S Chadwick

Kevin Chadwick, P.E.
Division Manager

cc: Julie Hoffman, MAG
File

SALT RIVER
PIMA-MARICOPA INDIAN COMMUNITY
10,005 E. OSBORN RD./SCOTTSDALE, AZ 85256
PHONE (480) 362-7400

BACKGROUND

The Salt River Pima-Maricopa Indian Community (SRPMIC) was not included in the initial phase of the developer's application process. The SRPMIC appreciates the opportunity to understand, research and to engage in the MAG 208 process.

On March 20, 2008 the MAG Water Quality Advisory Committee voted 9-7 to approve the Preserve at Goldfield Ranch 208 Application.

The area of development, unlike other 208 applications, has a very special and delicate ecosystem. The last few miles of the Verde River flows within SRPMIC boundaries, and the Verde River's confluence with the Salt River is also in the SRPMIC. We have concerns with water quality impacts to the northeast corner of our Community, as well as with the water supply. The Desert Nesting Bald Eagle was recently placed back on the Endangered Species List. We are gravely concerned about treated wastewater contaminants having detrimental impact on fish that eagles depend on for forage and water used for human consumption.

ISSUES

1. The SRPMIC still does not have adequate data from the developer to substantiate the extent and integrity of the confining clay layer. The cross sections provided in the Goldfield 208 Application identifies 8 wells with only 5 wells penetrating through the clay layer. This does not provide necessary data to verify the extent or integrity of the clay layer, which may impact the Verde River. This information is critical, as without substantiated evidence of a clay layer confining the aquifer proposed for use by Goldfield, water quality and quantity are at risk. Specifically, the Verde River and the Fountain Hills Subbasin that the SRPMIC shares with Goldfield and other communities may be impacted. There are currently only 3 wells on the Goldfield property. The developer used logs from other wells off their property to develop their cross sessions.

2. The SRPMIC is concerned with the unproven track record and the uncertain future of the company chosen to operate and manage the facility. The operation and management of the facility itself is to be done by the "A Quality Water Company" which does not currently provide similar services to any other developments in the Metropolitan Phoenix area. Their home and business addresses, listed as being in Williams, AZ., are the same. In addition, the company is not a perpetual corporation; their latest date to dissolve is 12/31/2010. This raises serious concerns with the company's ability to timely respond to emergency situations.

3. There is no back up plan outlined in the event of a disaster or emergency. The most recent concerns with local municipal reaction to drinking water contamination are a serious issue, which must be addressed. Also, costs associated with a back-up plan have not been identified.

4. The Goldfield Ranch 208 Application cannot be compared to other MAG 208 Applications that were previously approved. Unlike the other applications which were confined and managed by municipalities and thus had no opposition, the development area at issue has a special and delicate ecosystem. The Quintero Golf and Country Club Waste Water Treatment Plan (WWTP) are within the City of Peoria as is the Estates at Lakeside WWTP. The City planned to decommission the plant when a regional solution is available). The 208 application was supported by the City. The Scorpion Bay WWTP is also within the City of Peoria and also supported by the city. The Desert Oasis WWTP was intended to be decommissioned when the City of Surprise extended its infrastructure to pick up the development. It would be owned and operated by the City of Surprise. The Ruth Fisher School WWTP, within the City of Surprise and 8 miles from the nearest city, is an expansion/replacement of an existing small plant. They also added A+ recharge. The location and sponsorship by a major city and the future decommissioning are among the major differences between other 208 applications and the Goldfield application.

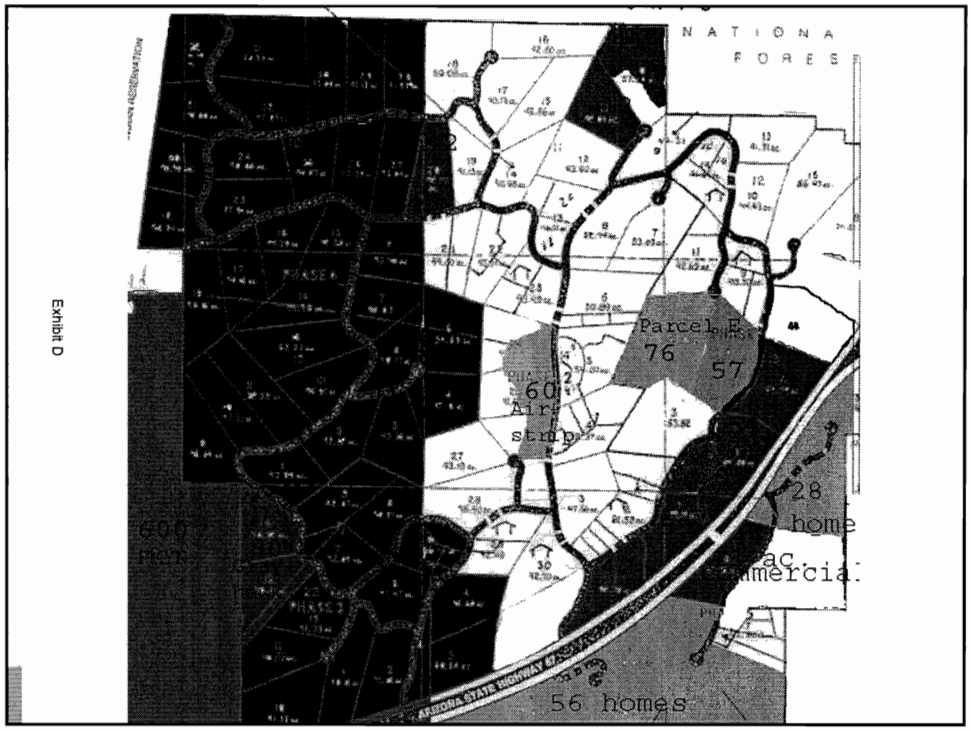
MAG Question:
Do certain areas lend themselves to being included in service area?

Evasive Answer:

Small parcels to the east, already with septic tanks, probably not (¶3.2.2)

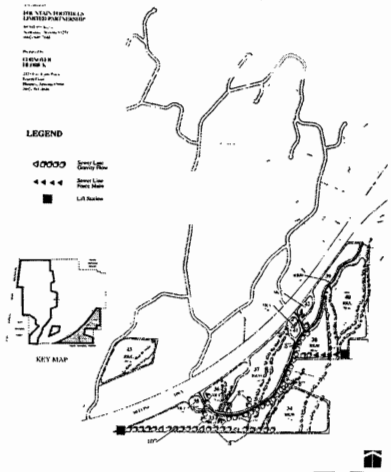
What was not answered?

- What about small parcels without septic tanks?
- What about large parcels?
- What about land to the west?
- What about land outside of Goldfield Ranch?



Example: Could the service area include the south side?

- In 1995, Maricopa County said "YES"

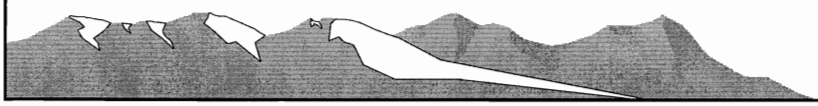


Can the plant handle nearby areas that are NOT small lots on septic?

- 600 FMYN x 2du/ac = 1200 homes
- 80 Grayhawk x 2du/ac = 160
- Ellman parcels C & D = 84
- Other Ellman @ R-190 = 44
- Other large @ R-190 = 88
- Total homes = 1576 homes
- X 320 gpd/du = **504,320 gallons/day**
  - More than DOUBLE planned capacity
  - Does not include 68 acres commercial

Why bother with this analysis?

- To prevent an "uncontrolled proliferation of small plants that could cause problems in the future" (MAG 208 WQMP § 4.5.2, at 4-224)



How can MAG prevent a proliferation of small plants?

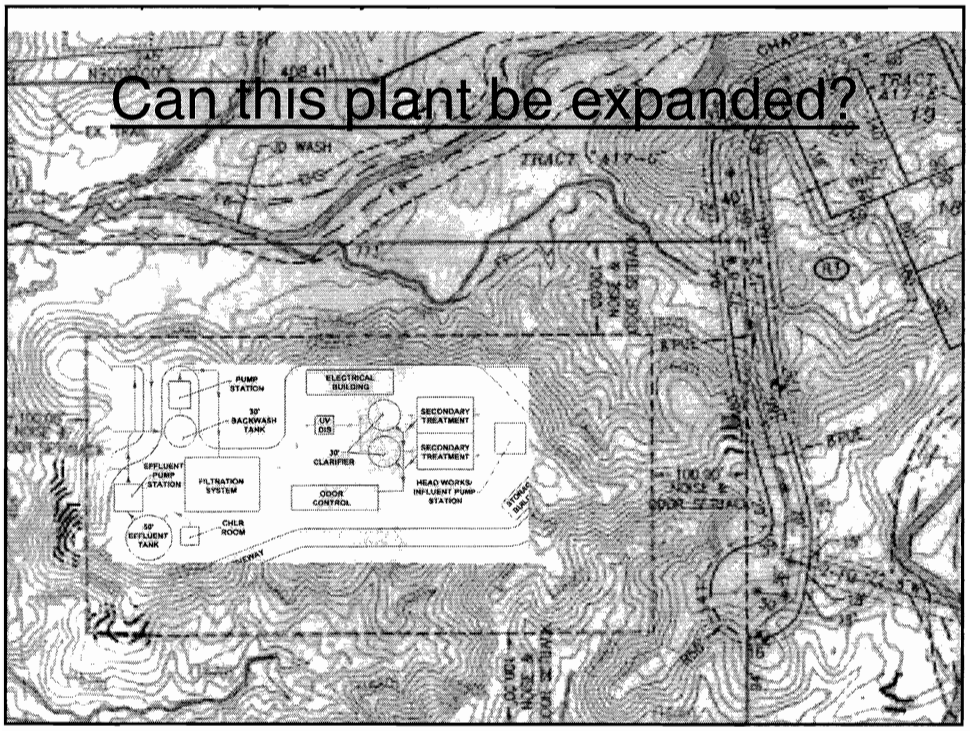
- Consider, when approving a plant design, whether it can be expanded to serve future needs

Question: Can this plant be expanded?

- Evasive Answer: The relatively small parcels of private land on the east will not likely exceed plant capacity (¶ 3.2)

What was not answered?

- Can this plant be expanded?
  - Yes or no?
  - An engineering question, not a lawyer question
- What about?
  - Large parcels
  - Parcels to the West, *e.g.*, Grayhawk
  - Ellman's other parcels
  - Commercial development
    - 18 ac. between C and D – 1995 DMP still in effect
    - 50 acres on FMYN land



GPD did not do its job

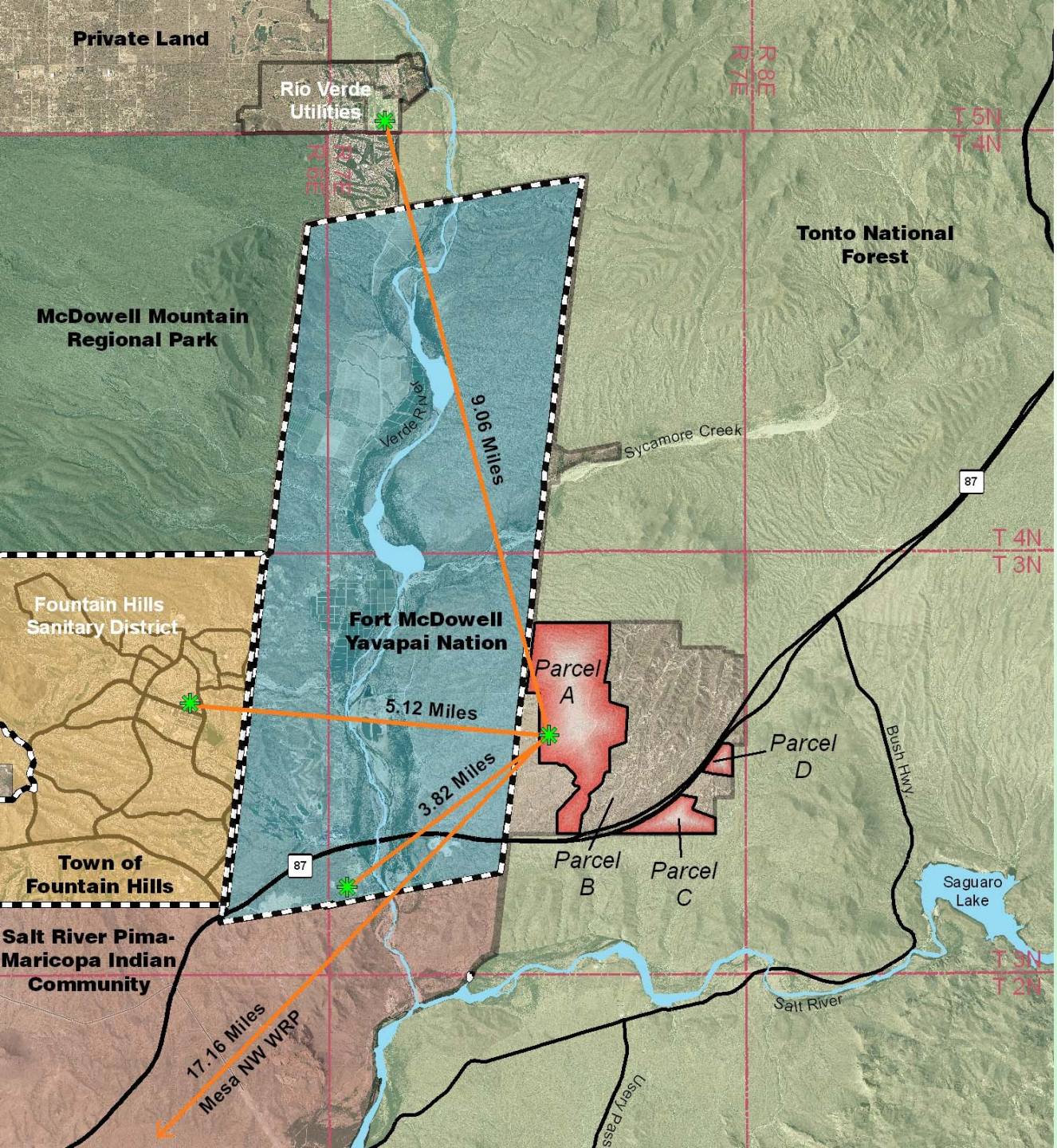
- MAG must do its job –
  - Send this back for GPD's engineers to consider ALL nearby areas
  - Send this back for GPD's engineers to answer whether plant could be expanded
  - Send this back for GPD to consider another site for a plant that could be doubled to meet future needs
  - Send this back for inquiry to ALL neighboring owners

This is what MAG planning is all about

MAG 208 Water Quality Management Plan
Small Plant Review and Approval
for

The Preserve at Goldfield Ranch Water Reclamation Facility

April 9, 2008



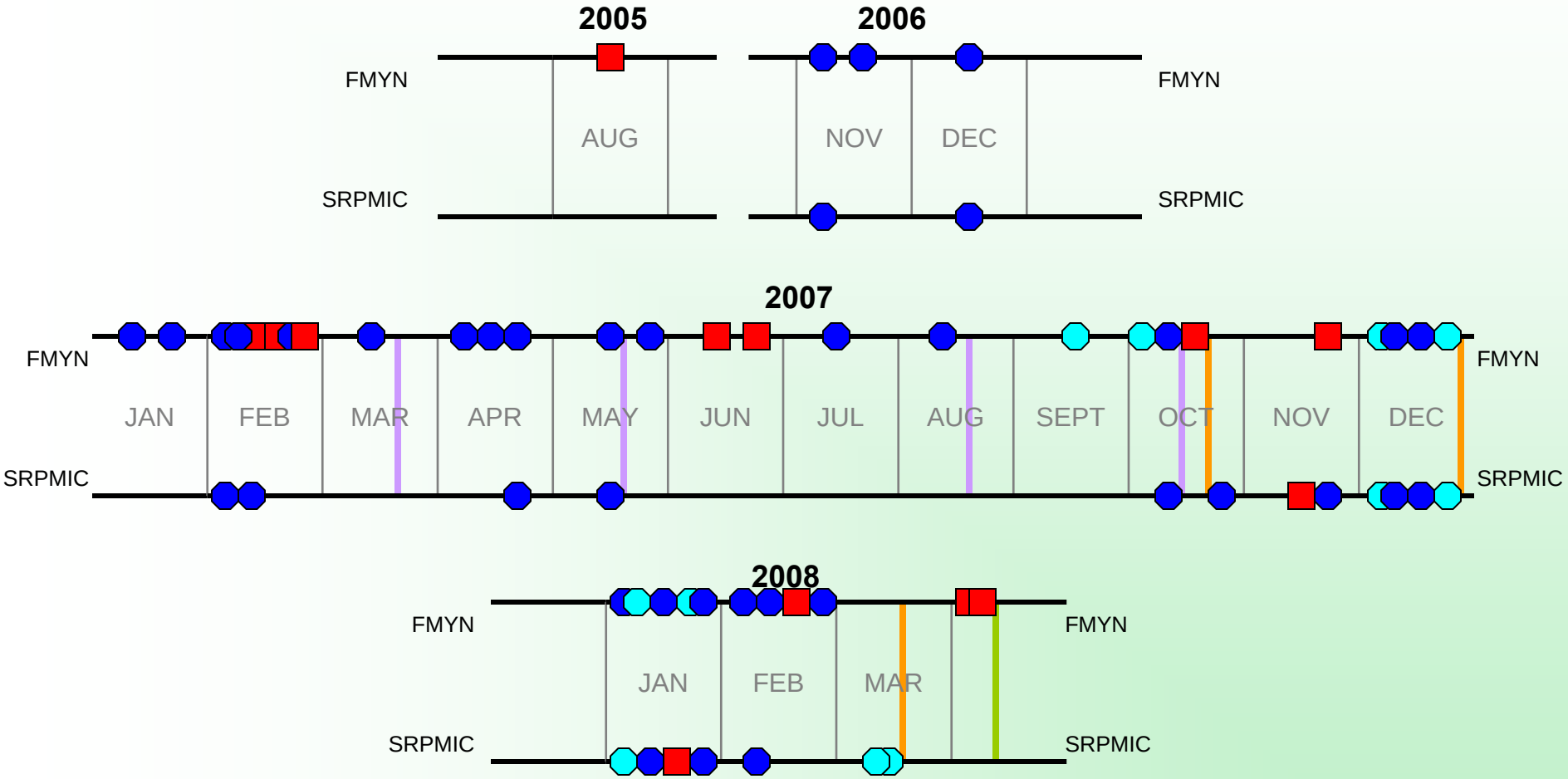
Proximity Map

DMP Comparison Chart

	1995	**2007**
Density	2,032 du 0.92 du/ac	1,000 du 0.5 du/ac
Commercial	90 acres	None
Golf Course	190 acres	None
Water Budget	2,127 acre-feet per year	732 acre-feet per year
Traffic	34,150 daily trips	6,912 daily trips

Responsible development

Timeline of Tribal Communication



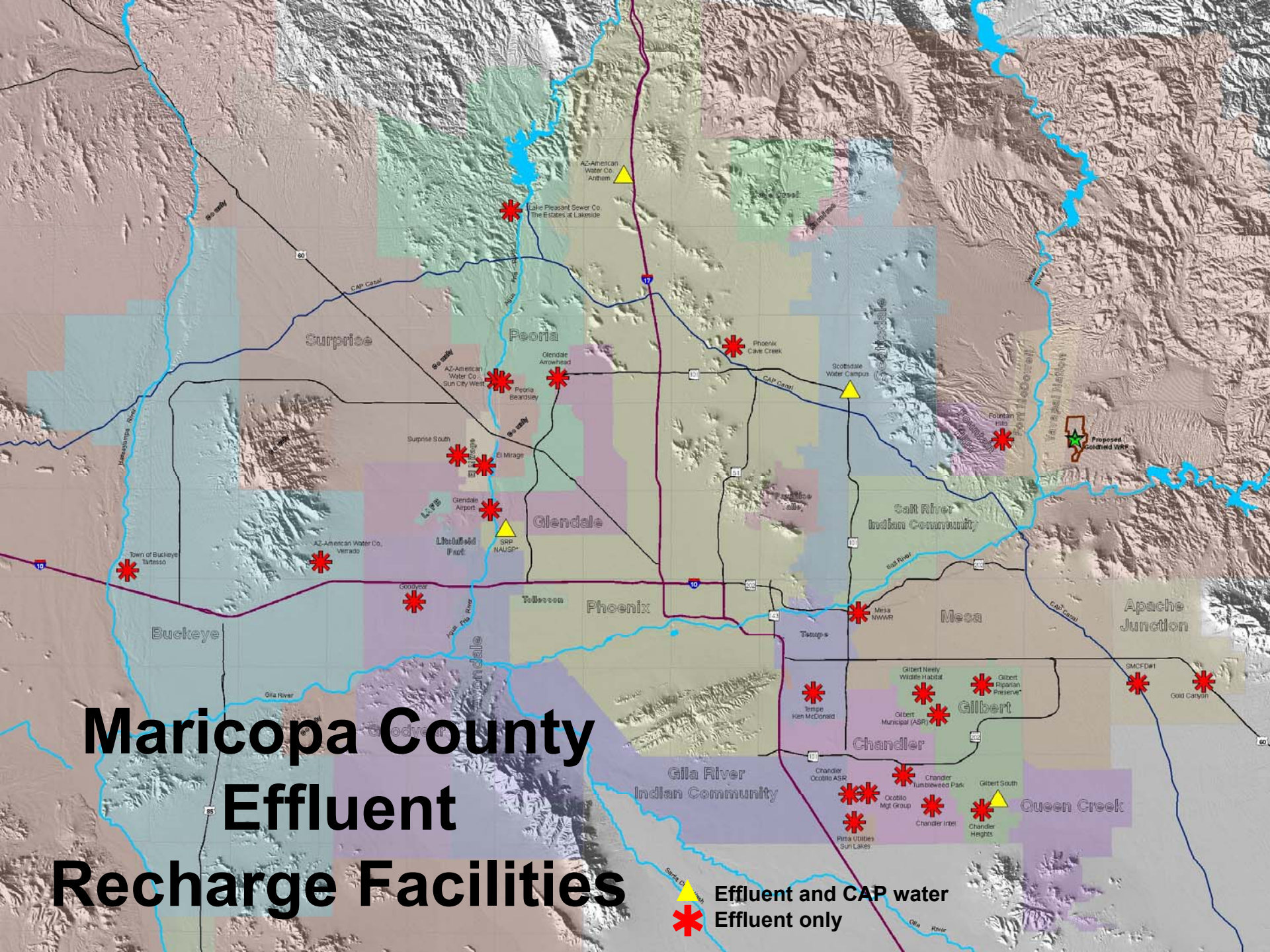
Meeting | Correspondence prepared by Goldfield | Correspondence received by Goldfield

WQAC meeting | MAG Management Committee meeting | Draft application to Maricopa County/MAG review

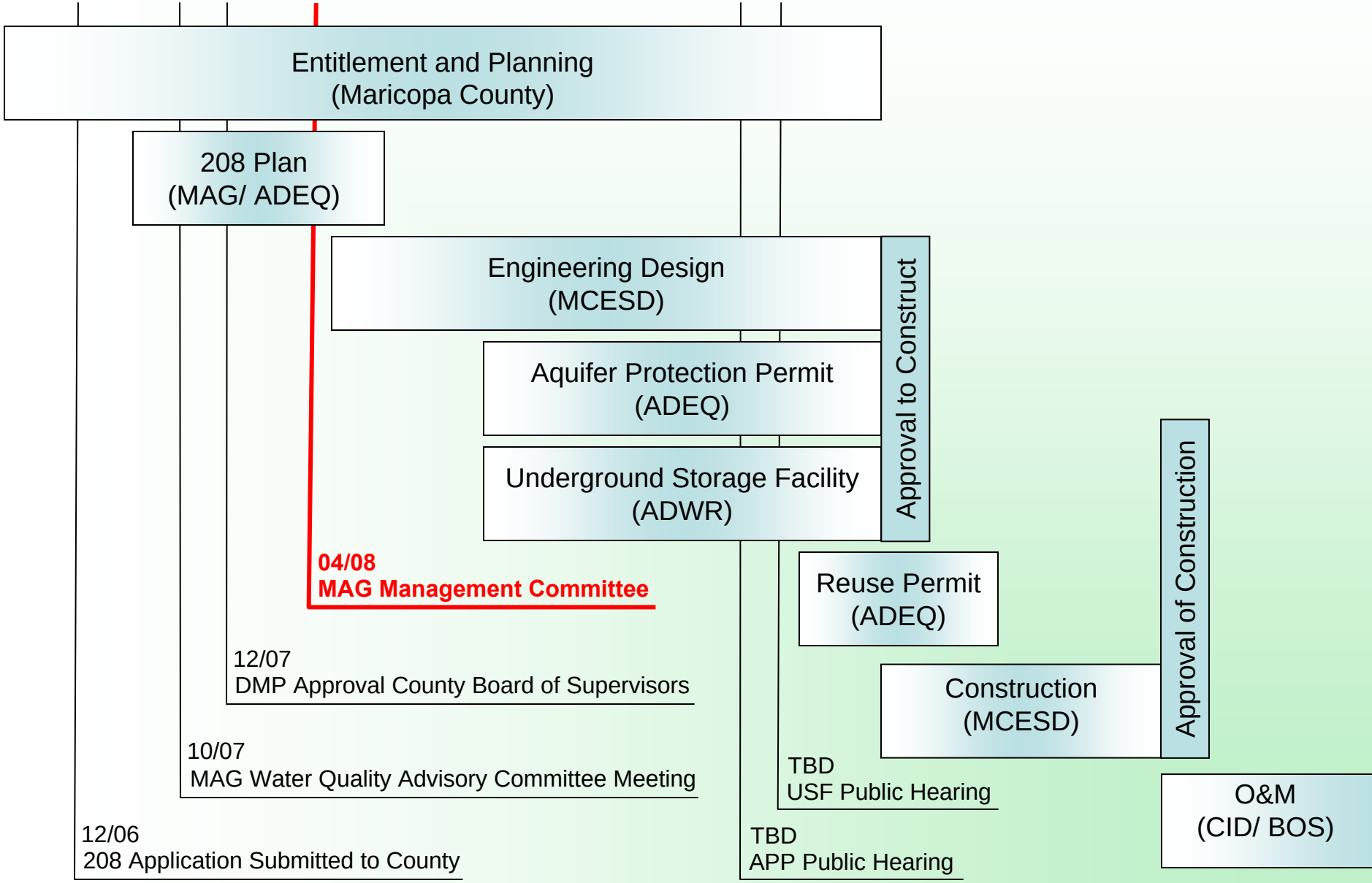
Key Concern: Water Quality

- ADEQ requires:
  - Effluent treated to A+ standards
    (AAC R18-11-303)
  - Water quality meets drinking water standards
    (Aquifer water quality standards, AAC R18-11-405)
  - Best available demonstrated control technology
    (AAC R18-9-B204)

Effluent quality and design requirements are the same for every wastewater treatment plant across the state


Maricopa County
Effluent
Recharge Facilities
Effluent and CAP water
Effluent only
AZ-American Water Co. Anthem
Lake Pleasant Sewer Co. The Estates at Lakeside
Surprise
Peoria
Glendale Arrowhead
AZ-American Water Co. Sun City West
Peoria Beardsley
Phoenix Cave Creek
Scottsdale Water Campus
Fountain Hills
Proposed Goldfield WRF
Surprise South
El Mirage
Glendale Airport
SRP NAUSP*
Glendale
Salt River Indian Community
Litchfield Park
AZ-American Water Co. Verrado
Town of Buckeye Tartesso
Goodyear
Tolleson
Phoenix
Mesa NWWR
Mesa
Apache Junction
Buckeye
Tempe
Gilbert Neely Wildlife Habitat
Gilbert Riparian Preserve*
Gilbert Municipal (ASR)
Gilbert
SMCFD#1
Gold Canyon
Tempe Ken McDonald
Chandler
Chandler Ocotillo ASR
Chandler Tumbleweed Park
Ocotillo Mgt Group
Chandler Intel
Gilbert South
Chandler Heights
Pima Utilities Sun Lakes
Gila River Indian Community
Queen Creek
Gila River
Agua Fria River
Salt River
CAP Canal

WRF Approval Process



208 Small Plant Criteria for Technical Sufficiency

Section 4.5.2(2) – Outside of Municipal Planning Area:

To be approved for construction, a small wastewater treatment plant (2.0 MGD ultimate capacity or less) not otherwise mentioned in the MAG 208 Plan and located outside a Municipal Small Plant Planning Area must:

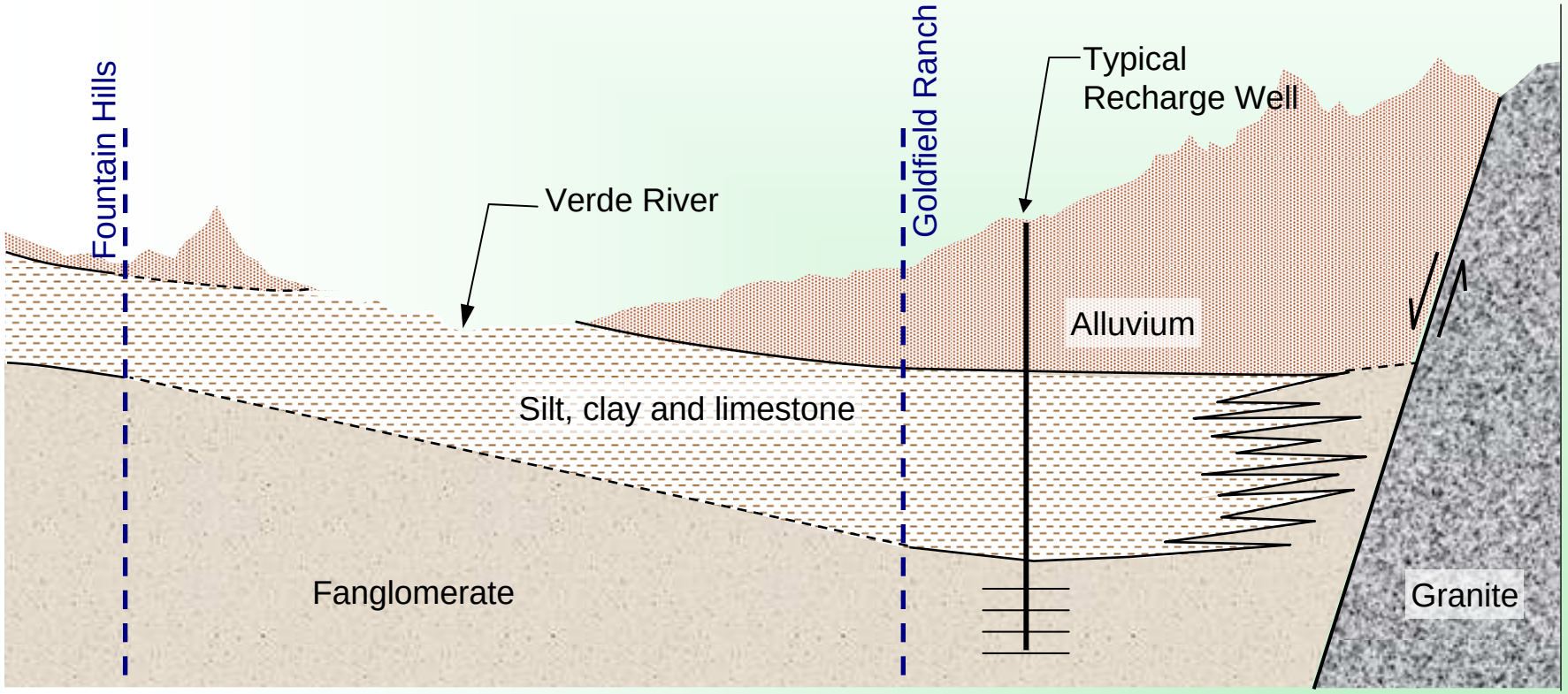
1. *Have the review and comment of any municipality whose Small Plant Planning Area is within three miles of the proposed plant location or service area;*
2. *Not adversely affect the operation or financial structure of existing or proposed wastewater treatment plants;*
3. *Be consistent with State and County regulations and other requirements;*
4. *Be otherwise consistent with the MAG 208 Plan; and,*
5. *Be evaluated and approved, or modified by Maricopa County Environmental Services Department (MCESD).*

The Preserve at Goldfield Ranch

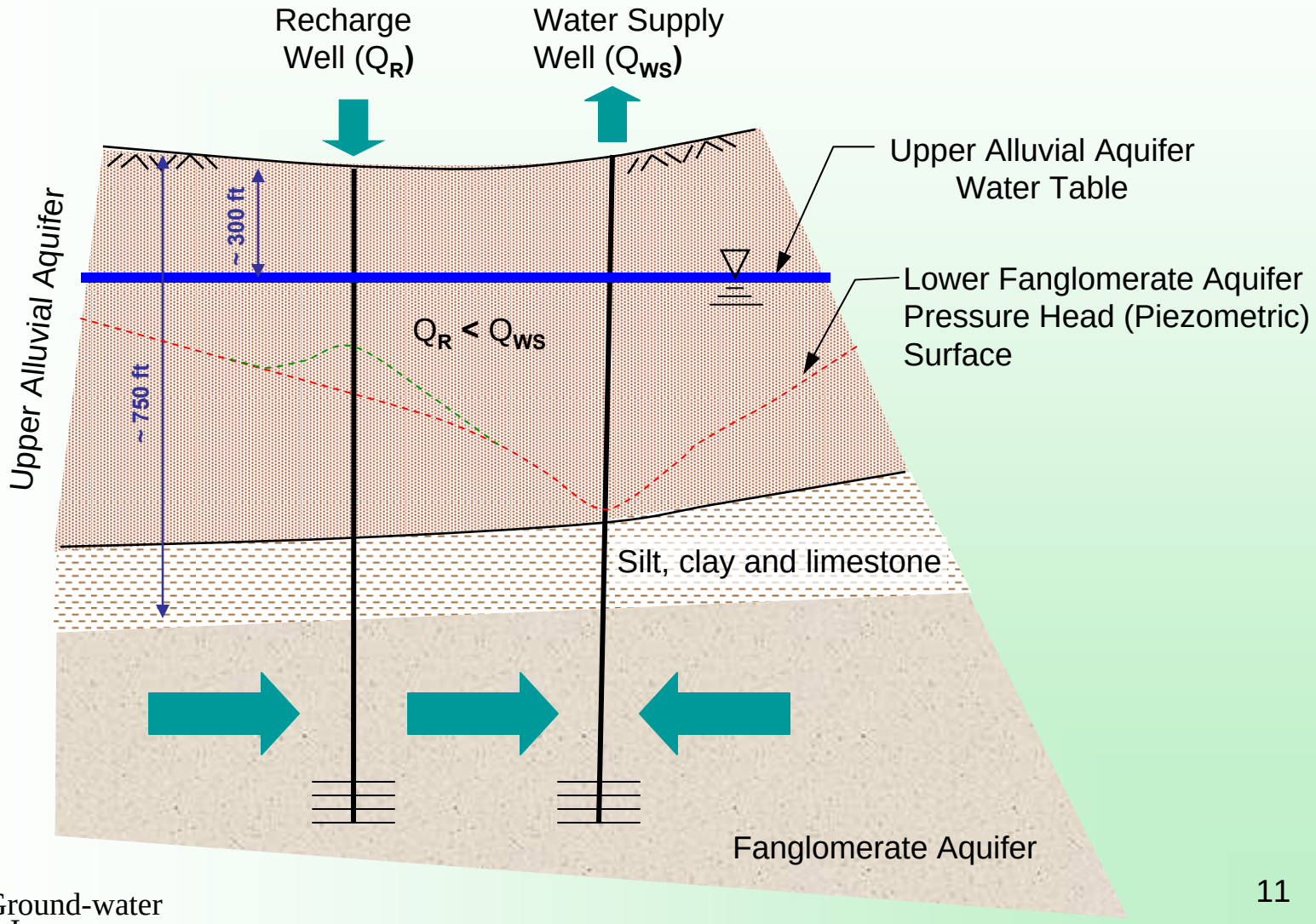
CMX

Southwest Ground-water Consultants, Inc.

Hyrdogeologic Cross-Section

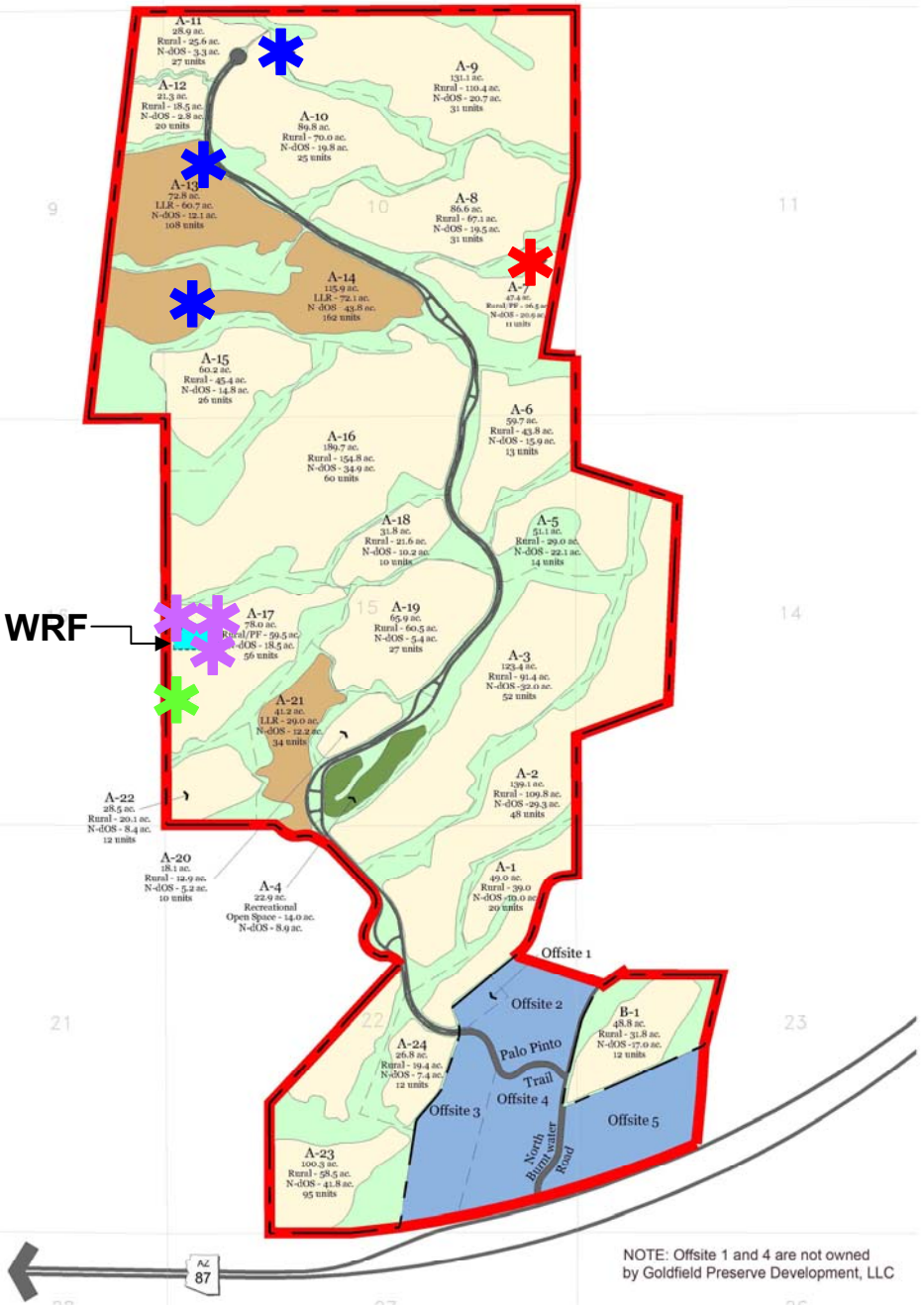


Recharge and Production Aquifer Cross-Section



Well Locations

- Separation between recharge wells and water supply wells is approximately 1 mile
- A monitoring well will be installed down-gradient of the recharge wells



Groundwater Well Site

Monitoring Well Site

Recharge Well Site

Water Campus

Groundwater Management Act
Safe Yield by 2025

[A] groundwater management goal which attempts to achieve and thereafter maintain a long-term balance between the annual amount of groundwater withdrawn in an active management area and the annual amount of natural and artificial recharge in the active management area. ARS §45-561(12).

Responsible development dictates recharge

Tribal Comment and Response

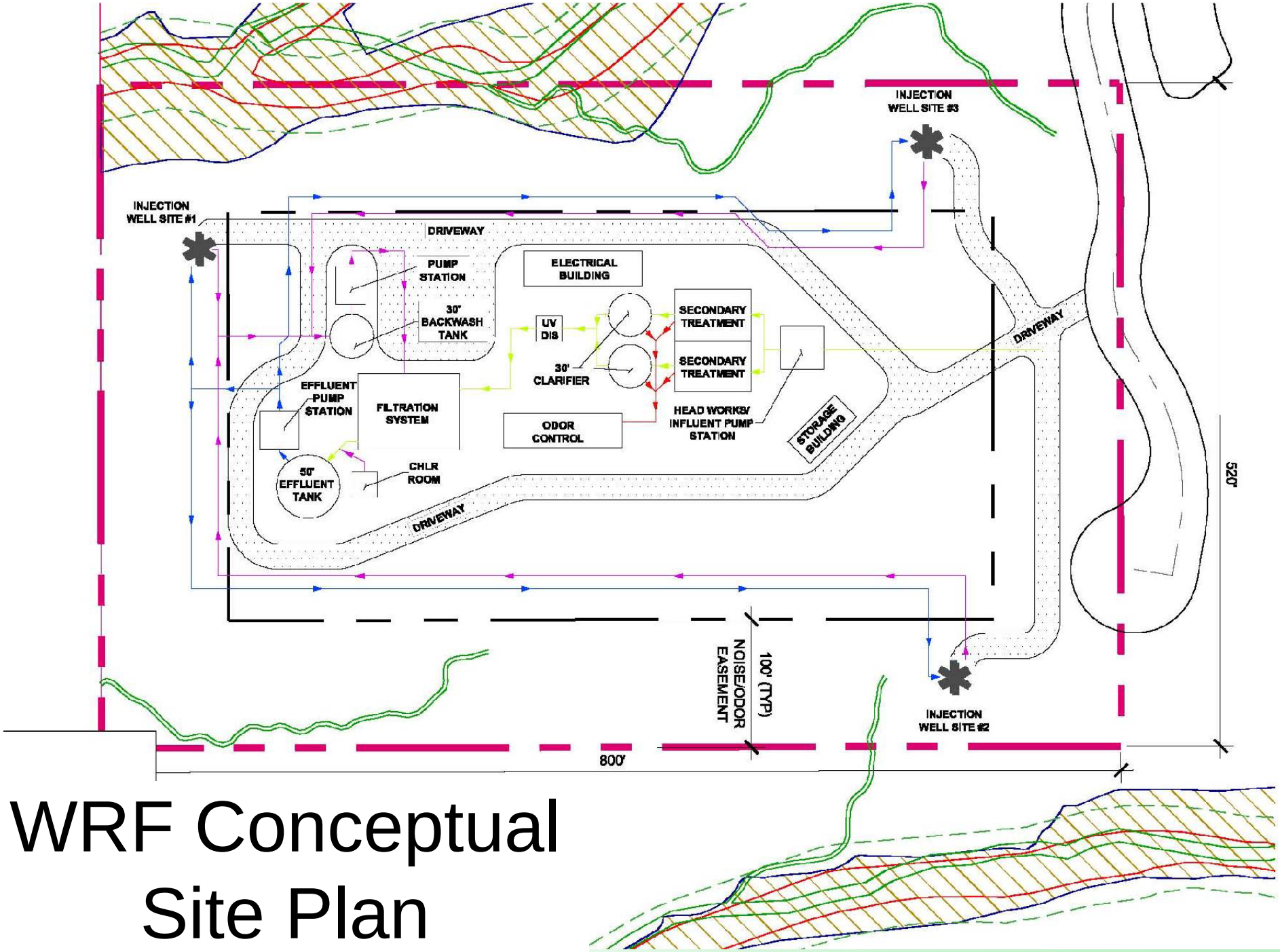
- Comment: Provide details of proposed treatment and effluent disposal
- Response:
  - Effluent quality and design requirements are the same for every wastewater treatment plant across the state
  - Regulated by ADEQ, ADWR and MCESD
  - Public process for APP and USF permitting

Tribal Comment and Response

- Comment: The following are missing…
  - Plant layout
  - Unit processes
  - Capital and O&M costs
  - Design criteria
  - Estimated impacts on adjacent properties
  - Demonstrate ability to satisfy permit requirements
- Response:
  - Conceptual site plan provided depicts unit processes
  - Costs provided
  - Design criteria regulated by ADEQ
  - No impact on adjacent properties (closed facility)
  - If cannot satisfy permit requirements, development cannot proceed

Tribal Comment and Response

- Comment: Commit to specific treatment plan to identify noise, odor potential
- Response:
  - Conceptual site plan shows 100’ setbacks
  - Nearest adjacent neighbors are within The Preserve development
  - Full noise, odor and aesthetic controls means:
    - Noise does not exceed 50 decibels at property boundary
      - Normal conversation = 60 decibels
    - All odor-producing components of the facility are fully enclosed (CLOSED SYSTEM)
    - Odor control devices are installed on all vents
    - Fencing aesthetically matched to surrounding area (AAC R18-9-B201)



WRF Conceptual Site Plan

Tribal Comment and Response

- Comment: Identify plan for sludge processing
- Response:
  - Alternatives for sludge treatment include:
    - Haul undigested sludge
    - Sludge digesting (equipped with aeration)
    - Sludge thickening (belt press)
    - Regulated by ADEQ under the Aquifer Protection Permit (AAC R18-9-1001 *et seq.*)

Tribal Comment and Response

- Comment: Avoid impacts to surface (Verde River) and groundwater
- Response:
  - ADEQ requires:
    - Effluent treated to A+ standards
      (AAC R18-11-303)
    - Water quality meets drinking water standards
      (Aquifer water quality standards, AAC R18-11-405)
    - Best available demonstrated control technology
      (AAC R18-9-B204)
  - Effluent quality and design requirements are the same for every wastewater treatment plant across the state

No discharge to Verde River

Tribal Comment and Response

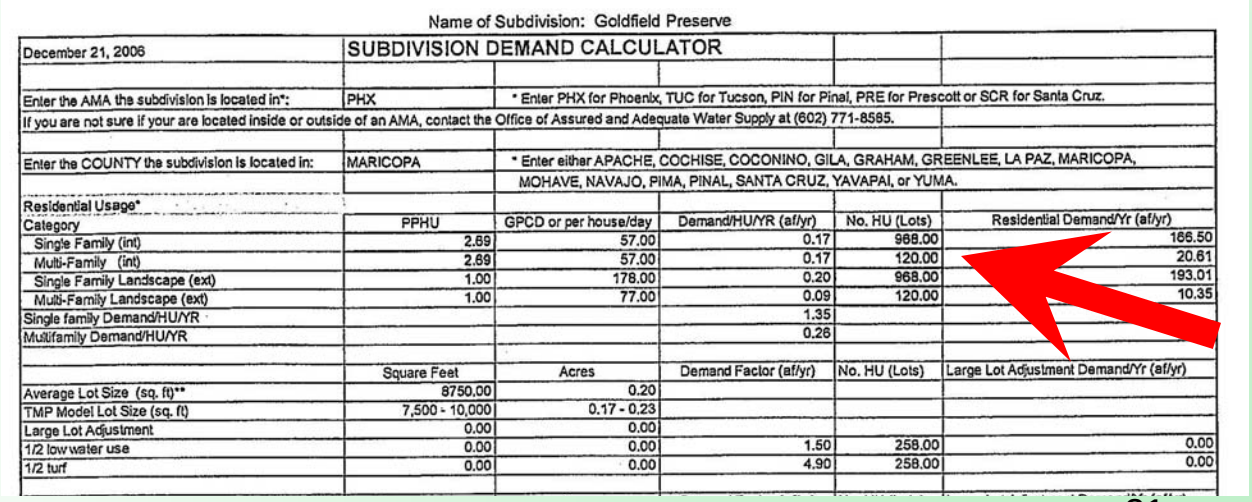
- Comment: Groundwater level decline will affect Community's water resources
- Response:
  - Issue does not pertain to the 208 Application
  - Regulated by ADWR under the Groundwater Management Act which precludes impacts to adjacent wells or users

Key Concern:
Water Quantity

Tribal Comment and Response

- Comment: Clarify resort/spa accounted for in Analysis of Assured Water Supply application
- Response:
  - Greatest potential water use included (with resort/spa indicated as 120 multi-family units)

Analysis of Assured Water Supply approved June 12, 2007



Name of Subdivision: Goldfield Preserve

December 21, 2006	SUBDIVISION DEMAND CALCULATOR				
Enter the AMA the subdivision is located in*:	PHX	* Enter PHX for Phoenix, TUC for Tucson, PIN for Pinal, PRE for Prescott or SCR for Santa Cruz.			
If you are not sure if your are located inside or outside of an AMA, contact the Office of Assured and Adequate Water Supply at (602) 771-8585.					
Enter the COUNTY the subdivision is located in:	MARICOPA	* Enter either APACHE, COCHISE, COCONINO, GILA, GRAHAM, GREENLEE, LA PAZ, MARICOPA, MOHAVE, NAVAJO, PIMA, PINAL, SANTA CRUZ, YAVAPAI, or YUMA.			
Residential Usage*					
Category	PPHU	GPCD or per house/day	Demand/HU/YR (af/yr)	No. HU (Lots)	Residential Demand/Yr (af/yr)
Single Family (int)	2.69	57.00	0.17	988.00	166.50
Multi-Family (int)	2.69	57.00	0.17	120.00	20.61
Single Family Landscape (ext)	1.00	178.00	0.20	968.00	193.01
Multi-Family Landscape (ext)	1.00	77.00	0.09	120.00	10.35
Single family Demand/HU/YR			1.35		
Multifamily Demand/HU/YR			0.26		
	Square Feet	Acres	Demand Factor (af/yr)	No. HU (Lots)	Large Lot Adjustment Demand/Yr (af/yr)
Average Lot Size (sq. ft)**	8750.00	0.20			
TMP Model Lot Size (sq. ft)	7,500 - 10,000	0.17 - 0.23			
Large Lot Adjustment	0.00	0.00			
1/2 low water use	0.00	0.00	1.50	258.00	0.00
1/2 turf	0.00	0.00	4.90	258.00	0.00

Tribal Comment and Response

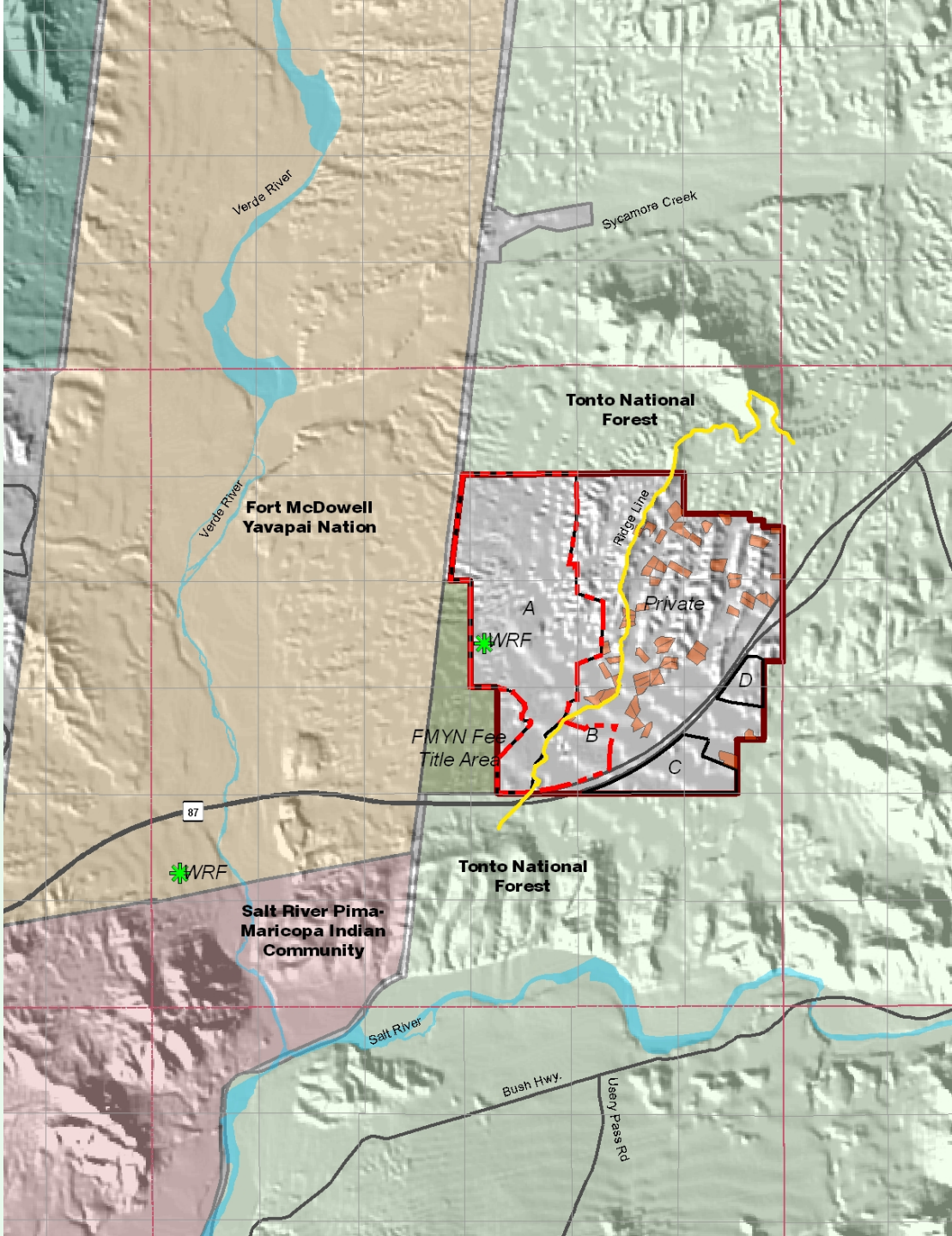
- Comment: Provide for proposed commercial customers
- Response:
  - Wastewater flow from potential restaurant less than 1 or 2 percent of total flow to WRF
  - Grease trap anticipated as part of WRF design
  - Grease trap anticipated at restaurant
  - Wastewater flow from potential resort/spa including restaurant 13 percent of total flow to WRF
  - Removal of detergents part of facility design
  - Anticipated influent water quality consistent with MCESD comments due to low flow fixtures

Tribal Comment and Response

- Comment: Provide emergency plan and redundancy
- Response:
  - Contingency plan required under Aquifer Protection Permit (AAC R18-9-A204)
    - Stormwater management (SWPPP) and Best Management Practices, such as erosion control, dust control, sediment control and good housekeeping/ materials management
    - Monitoring and sampling plan
    - Reporting requirements
    - Catastrophic failure contained onsite
  - Redundancy factored into engineering design
    - Design operating capacity will be two times the average day flow
    - Redundant recharge wells
    - Standby generator

Tribal Comment and Response

- Comment: Reduce need for septic
- Response:
  - Parcels C&D proposed for 1.5+ acre lots
  - Distance, topography, jurisdictional waters and State Route 87 constrain the feasibility of serving these parcels



Tribal Comment and Response

- Comment: Facility financing
- Response:
  - Construction by developer
    - Financial capacity demonstrated at $4.8M or ~$12/gallon
  - Operation & Maintenance by CID governed by the Maricopa County Board of Supervisors
  - Financial assurance letter, Consolidated Financial Report and independent auditor's assessment of report provided

Comparison of Financial Documentation in Approved 208 Plan Amendments

		Financial Statement Provided	Financial Backing by Municipality	WWTP Construction Funding	WWTP Operation Funding
2002	**Quintero Golf and Country Club**	No – Text statement indicating developer funding construction	Yes	Developer	City of Peoria (user fees)
2003	**Desert Oasis**	Yes, but not for entity funding WWTP – Equity Assets $20,594,000	No	Developer	Arizona-American Water Company (user fees collected by City of Surprise)
2004	**Ruth Fisher School WWTP**	No – Letter from school indicating sufficient capital	No	Developer	Contracted Certified Operator
2006	**Estates at Lakeside**	Yes – Equity Assets $100,000	Yes	Developer	City of Peoria (user fees)
2007	**Scorpion Bay WWTP**	Yes – Letter from M&I Bank funding 80% of construction	No	Developer	Owner (user fees)
2008	**Preserve at Goldfield Ranch WRF**	Yes – Equity Assets $ 4,862,255	No	Developer	Contracted Certified Operator (user fees)

Comparison of Operation & Maintenance Costs in Approved 208 Plan Amendments

	MAG 208 Plan	WRF Capacity (MGD)	Annual Operation & Maintenance Cost	Cost per gallon
2002	**Quintero Golf and Country Club**	0.15	$210 (cited in report as $1.40/1,000 gallons)	$0.0014
2003	**Desert Oasis**	0.35	Not Provided	Unknown
2004	**Ruth Fisher School WWTP**	0.042	$93,260	$0.0061
2006	**Estates at Lakeside**	0.12	Not Provided	Unknown
2007	**Scorpion Bay WWTP**	0.035	$121,500 at Year 5 (buildout)	$0.0095
2008	**Preserve at Goldfield Ranch WRF**	0.40	$250,000-$300,000	$0.0017-$0.0021

Note: The impact of different treatment technologies, location, terrain and presence of existing facilities are not factored into this comparison.

Tribal Comment and Response

- Comment: No letter provided to FMYN to determine if we will adversely affect the operation or financial structure of their existing facility as a neighboring jurisdiction
- Response:
  - Letter and Application provided to FMYN on May 14, 2007
  - FMYN previously stated there was no desire to provide wastewater service to Goldfield
  - Connection to existing FMYN facility infeasible due to: distance, topography, land ownership, existing State Route 87 and Verde River

Tribal Comment and Response

- Comment: Groundwater mounding and biological clogging
- Response:
  - Mounding
    - Premise of USF permit is demonstration of no unreasonable harm
    - USF permit application requires mounding analysis to estimate area of potential impact
    - Quarterly measurement and reporting of water levels including alert levels
    - Mounding is an issue when water levels approach within 10 to 20 feet of the ground surface
    - Depth to groundwater is approximately 300 feet
    - Recharge will be to lower, confined aquifer
  - Biological clogging
    - Minimized through filtration, disinfection and proper operation and maintenance (including backwash)
    - Common practice – Fountain Hills, Scottsdale, Chandler, et al. recharge

Tribal Comment and Response

- Comment: Provide detailed site plan
- Response:
  - Conceptual site plan provided
  - Engineered site plan to be provided at time of Aquifer Protection Permit and Underground Storage Facility permit applications

Tribal Comment and Response

- Comment: Apply for Underground Storage Facility and Aquifer Protection Permits
- Response:
  - Pre-application meetings held with ADEQ on March 25, 2008
  - Pre-application meeting scheduled with ADWR

Tribal Comment and Response

- Comment: Arizona Corporation Commission reports A Quality Water Company to be dissolved
- Response:
  - Arizona Corporation Commission filings will be rectified
  - County Improvement District (Maricopa County Board of Supervisors) has oversight

Tribal Comment and Response

- Comment: Provide additional hydrogeologic information
- Response:
  - Additional information will be provided when available pursuant to the Aquifer Protection Permit and the Underground Storage Facility permit

Tribal Comment and Response

- Comment: Stormwater and irrigation water may percolate into the upper/middle aquifer units and impact the Verde River
- Response:
  - Issue does not pertain to the 208 Application
  - Drainage and irrigation system designs provide for retention of stormwater flows
  - Reviewed and approved through Maricopa County

Tribal Comment and Response

- Comment: Report fails to assess if connection exists between Fountain Hills subbasin and the adjacent subbasins within the Phoenix AMA which may impact water quality
  - SRPMIC correspondence acknowledges "research based on information in ADWR reports, indicates that there is no connection."
- Response:
  - Effluent to meet A+ water quality standards
  - Regulated under Aquifer Protection Permit
  - Required ongoing monitoring and reporting to safeguard down-gradient users

Tribal Comment and Response

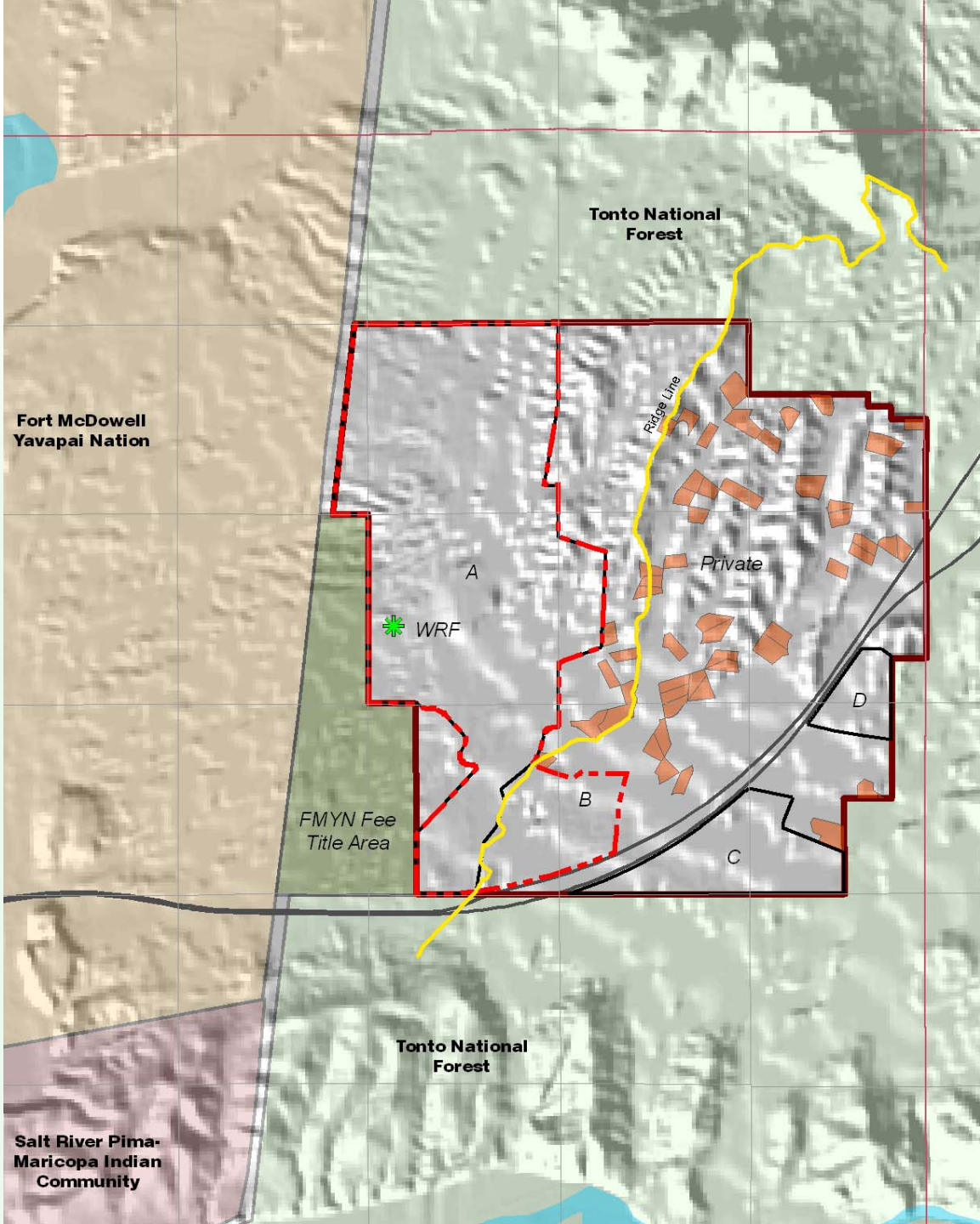
- Comment: Desert nesting bald eagle may be impacted by micro-pharmaceuticals and other by-products in the Verde River
- Response:
  - Issue does not pertain to the 208 Application
  - No discharge to the Verde River
  - WRF will comply with all applicable regulations and standards

Tribal Comment and Response

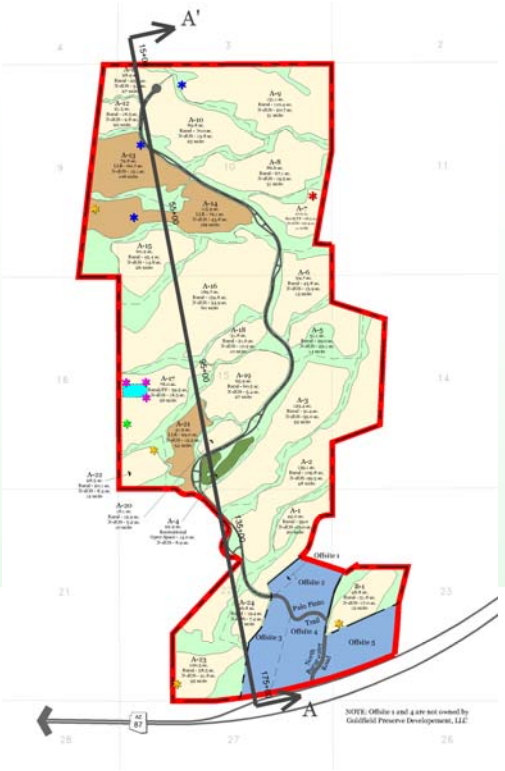
- Comment: Clay layer does not confine the upper and lower aquifer and thins out at the edges
- Response:
  - Water quality concerns addressed irrespective
  - Well tests performed on site show aquifer is confined
  - Additional investigation is ongoing
  - Reference materials supporting presence of confining clay layer (playa deposit)
    - Pope, Jr. C.W. 1974. *Geology of the Lower Verde River Valley, Maricopa County, Arizona*. M.S. thesis, Arizona State University (LD 179.151974P66)
    - Skotnicki, S.J., E. M. Young, T.C. Goode and G.L. Bushner 2003. *Subsurface Geologic Investigation of Fountain Hills and Lower Verde River Valley, Maricopa County, Arizona.* Arizona Geological Survey Contributed Report CR-03-B.
    - E.L. Montgomery & Associates, 2004. *Physical Availability Determination in Support of a Modification of Designation of Assured Water Supply for Chaparral City Water Company, Fountain Hills, Arizona.* Consultant's Report.

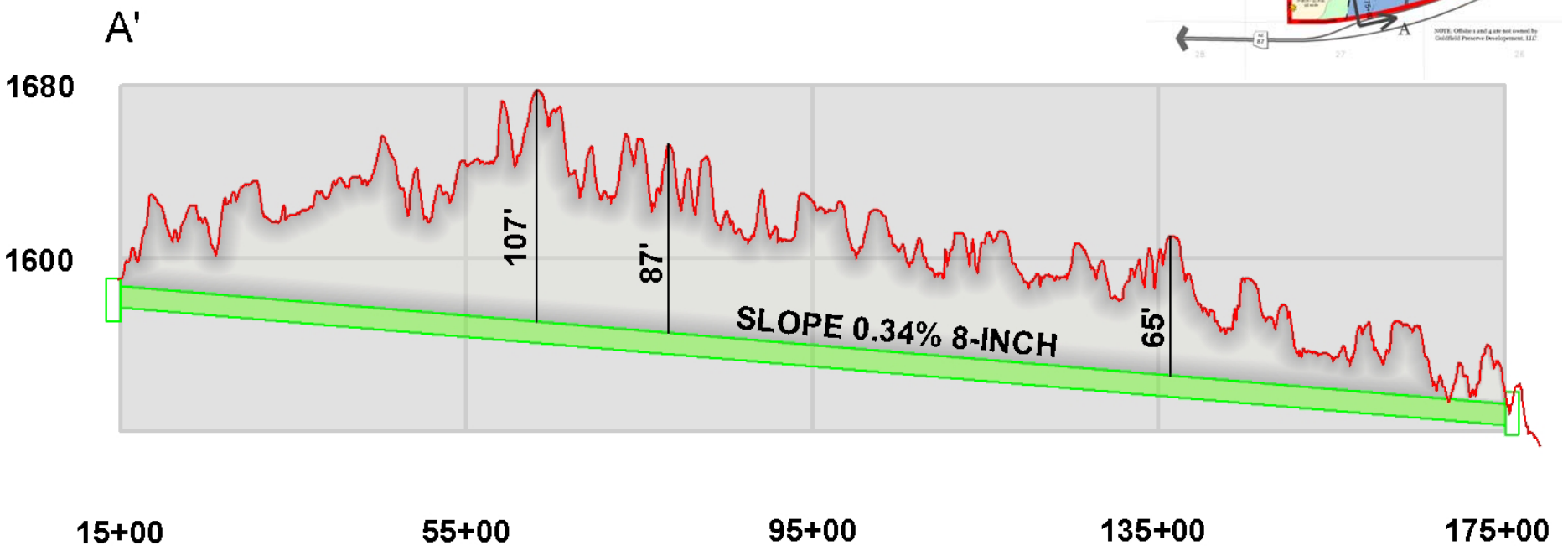
Wastewater Service to Goldfield Ranch

- Topographic/ hydrologic constraints
- Limited access to parcels does not coincide with natural fall of land
- Existing 5 acre or larger lots to east operate on septic systems
- Economically infeasible – separate property owners



Topographic Constraints





Target Effluent Concentrations

	Required Effluent Concentration (AAC Title 18, Chapters 9 and 11)	Design Goal Effluent Concentration
Total suspended solids (TSS), mg/L	30	10
Biological oxygen demand (BOD), mg/L	30	10
Total nitrogen, mg/L as N	10	5
Total phosphorus, mg/L as P	NA	1 (85% efficiency)

Requirements for Individual Aquifer Protection Permit

- Technical engineering design documents (AAC R18-9-A202)
- Financial capacity demonstration (AAC R18-9-A203)
- Contingency plan (AAC R18-9-A204)
- Alert levels, discharge limitations and acceptable quality levels (AAC R18-9-A205)
- Monitoring requirements (AAC R18-9-A206)
- Reporting requirements (AAC R18-9-A207)
- Compliance schedule (AAC R18-9-A208)
- Temporary cessation, closure and post-closure (AAC R18-9-A209)

Requirements for Underground Storage Facility Permit

- Technical capability to construct and operate the USF
- Financial capability demonstration
- Hydrological feasibility
- Project will not cause unreasonable harm
- Requires Aquifer Protection Permit
- A.R.S. § 45-811.01(C)

Requirements of Aquifer Protection Permit – Individual Permits

- Technical engineering design documents (AAC R18-9-A202)
- Financial capacity demonstration (AAC R18-9-A203)
- Contingency plan (AAC R18-9-A204)
- Alert levels, discharge limitations and acceptable quality levels (AAC R18-9-A205)
- Monitoring requirements (AAC R18-9-A206)
- Reporting requirements (AAC R18-9-A207)
- Compliance schedule (AAC R18-9-A208)
- Temporary cessation, closure and post-closure (AAC R18-9-A209)

APP Technical Requirements

(AAC R18-9-A202)

- Topographic map
- Facility site plan
- Facility design documents
- Proposed facility discharge activities
- Best Available Demonstrated Control Technology (BADCT)
- Contingency plan
- Hydrogeologic study – define discharge impact area
- Alert levels, discharge limitations, monitoring requirements, compliance schedules and temporary cessation
- Closure and post-closure plans
- Additional information as required by ADEQ

APP Financial Requirements

(AAC R18-9-A203)

- Financial capability for:
  - Construction
  - Operation and maintenance
  - Closure
  - Post-closure care
- Proof of financial assurance mechanism
- Permit amendment required if financial assurance changes
- Maintain recordkeeping

APP Contingency Plan Requirements

(AAC R18-9-A204)

- Contingency plan includes:
  - Actions to be taken if a discharge violation occurs
  - 24-hour emergency response measures
  - Name of emergency response coordinator
  - Contact persons
  - Procedures, personnel and equipment to mitigate unauthorized discharges

APP Alert Levels, Discharge Limitations and Acceptable Quality Levels

(AAC R18-9-A205)

- ADEQ prescribes:
  - Aquifer Water Quality Standards
  - Acceptable Quality Levels
  - Discharge limitations
  - Permit conditions
  - Alert levels
  - No endangerment to the public health or environment

APP Monitoring Requirements

(AAC R18-9-A206)

- Monitoring requirements to be determined by ADEQ
- In depth recordkeeping of each sample
- Monitoring record for each measurement made
- Maintain monitoring records for a minimum of 10 years

APP Reporting Requirements

(AAC R18-9-A207)

- Notification – within 5 days of any permit violation
- Written report to ADEQ – within 30 days
- Notification – within 5 days of bankruptcy or other federal or state environmental violations

APP Compliance Schedule Requirements

(AAC R18-9-A208)

- Compliance schedule considers:
  - Character and impact of discharge
  - Nature of construction
  - Number of persons potentially affected by discharge
  - Current state of treatment facility
  - Age of the facility

APP Temporary Cessation, Closure and Post-closure Requirements

(AAC R18-9-A209)

- Temporary Cessation
  - Notify ADEQ before cessation of 60 days or more
  - Conditions specified
- Closure
  - Notify ADEQ of intent to cease operations
  - Extensive closure plan
- Post-Closure
  - Detailed post-closure monitoring and maintenance plan

Requirements of Underground Storage Facility Permit

Slide 1 of 8

- USF Site and Facility Characteristics (Section III-B)
- Unreasonable Harm and Hydrologic Feasibility Analysis (Section III-C)
- Technical Capability (Section III-D)
- Financial Capability (Section III-E)
- Legal Access (Section III-F)

USF Site and Facility Characteristics

(Section III-B)

- USF site characteristics
  - Narrative description
  - Regional map
  - Location site map
- Facility characteristics
  - Description of wells
  - Description of recharge basins
  - Description of trenches
  - Description of managed and constructed in-channel recharge
  - Define multiple use project, if necessary
  - Description of source water and delivery system
  - Facility map
  - Description of design contingencies

USF Site and Facility Characteristics

(Section III-B) continued

- Geology
  - Geologic characteristics
  - Subsurface geology
  - Available geologic and well driller logs within 1 mile of the site
  - Geophysical logs and boring logs
- Hydrogeology
  - Demonstrate aquifer underlying the recharge site
  - Vertical and horizontal extent, thickness and lithology
  - Vadose zone vertical and horizontal extent, thickness, lithology and potential perching units
  - Current water levels
  - Water level changes – current and historic

USF Unreasonable Harm and Hydrologic Feasibility Analysis

(Section III-C)

- Maximum area of impact and mounding analysis
  - Calculate the maximum area of impact of a one-foot water level rise
  - Perform mounding analysis of the maximum water storage volume
  - Graph anticipated rate of groundwater rise
  - Map one-foot water level rise
  - Narrative supporting maximum area of impact and mounding analysis
- Land and water use inventory
  - Inventory wells within one mile
  - Inventory of structures, land uses, conditions and facilities within the maximum area of impact
- Water quality
  - Project required to comply with APP permit

USF Unreasonable Harm and Hydrologic Feasibility Analysis

(Section III-C) continued

- Unreasonable harm analysis
  - USF design, construction and operation
  - Demonstrate that the maximum amount of water that could be in storage at any one time will not cause unreasonable harm to the land or other water users
  - Water storage at the USF governed by an APP and will not cause or contribute to a violation of state aquifer water quality standards
- Hydrologic feasibility
  - Facility designed, maintained, monitored and operated for optimal recharge efficiency
  - No insurmountable barriers to recharge
  - Storage of the maximum amount of water that could be in storage at anyone time is hydraulically feasible

USF Unreasonable Harm and Hydrologic Feasibility Analysis

(Section III-C) continued

- Monitoring plan
  - Monitor wells
  - Measure water levels and water quality (both source water and groundwater)
  - Alert levels indicate need for a quick response to avoid the potential for unreasonable harm
  - Operational prohibition limit above alert level indicates that recharge activity must stop
  - Action plan for alert levels and operational prohibition limits for both water levels and water quality
  - Water quality monitoring plan
- Operation and maintenance plan

USF Technical Capability

(Section III-D)

- Demonstration of technical expertise:
  - Licenses, certifications and resumes for persons principally responsible for USF construction and operation

USF Financial Capability

(Section III-E)

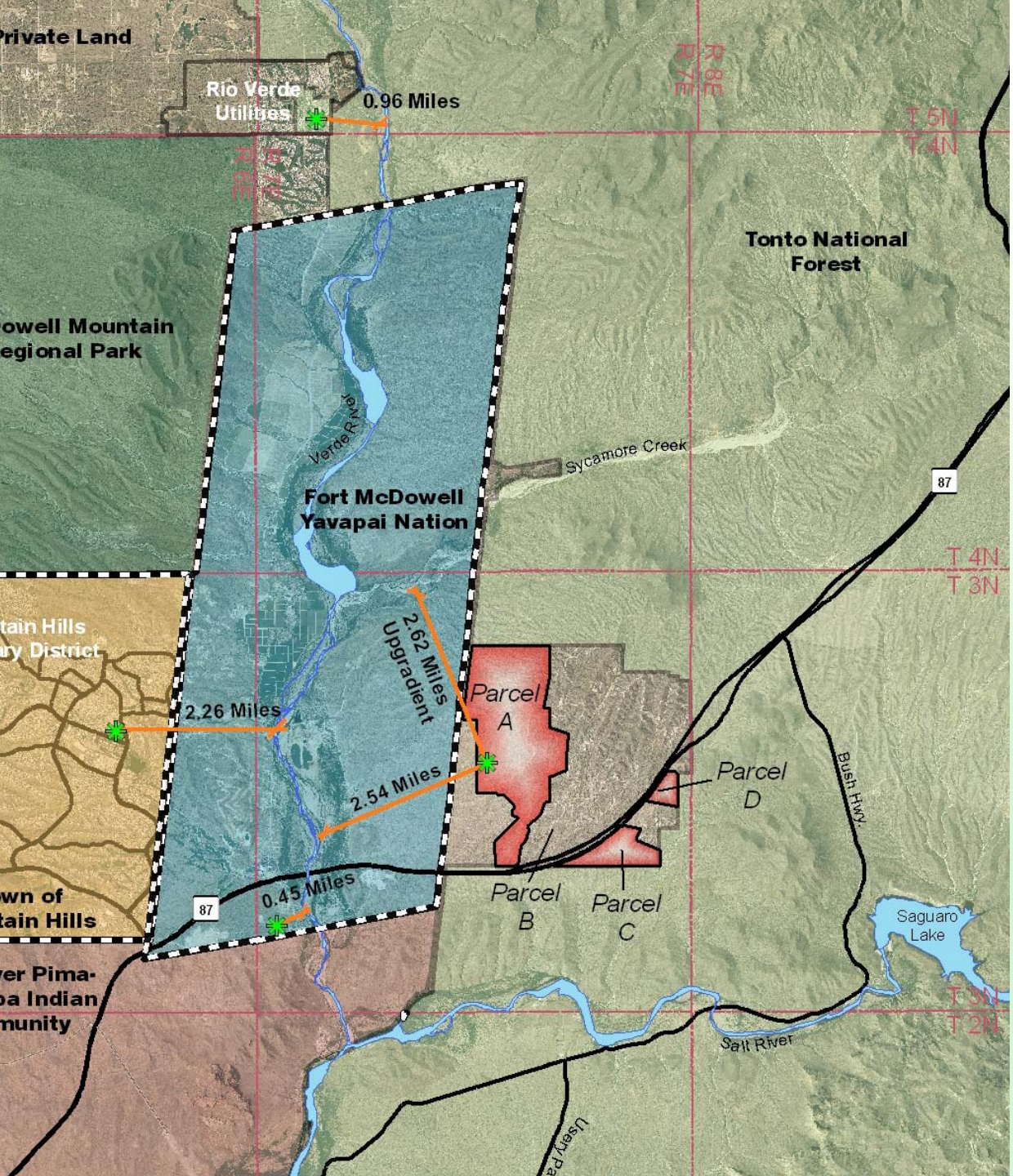
Slide 8 of 8

- Construction, operation, regulatory compliance and maintenance costs
- Certify adequate existing financial resources for construction and operation

USF Legal Access

(Section III-F)

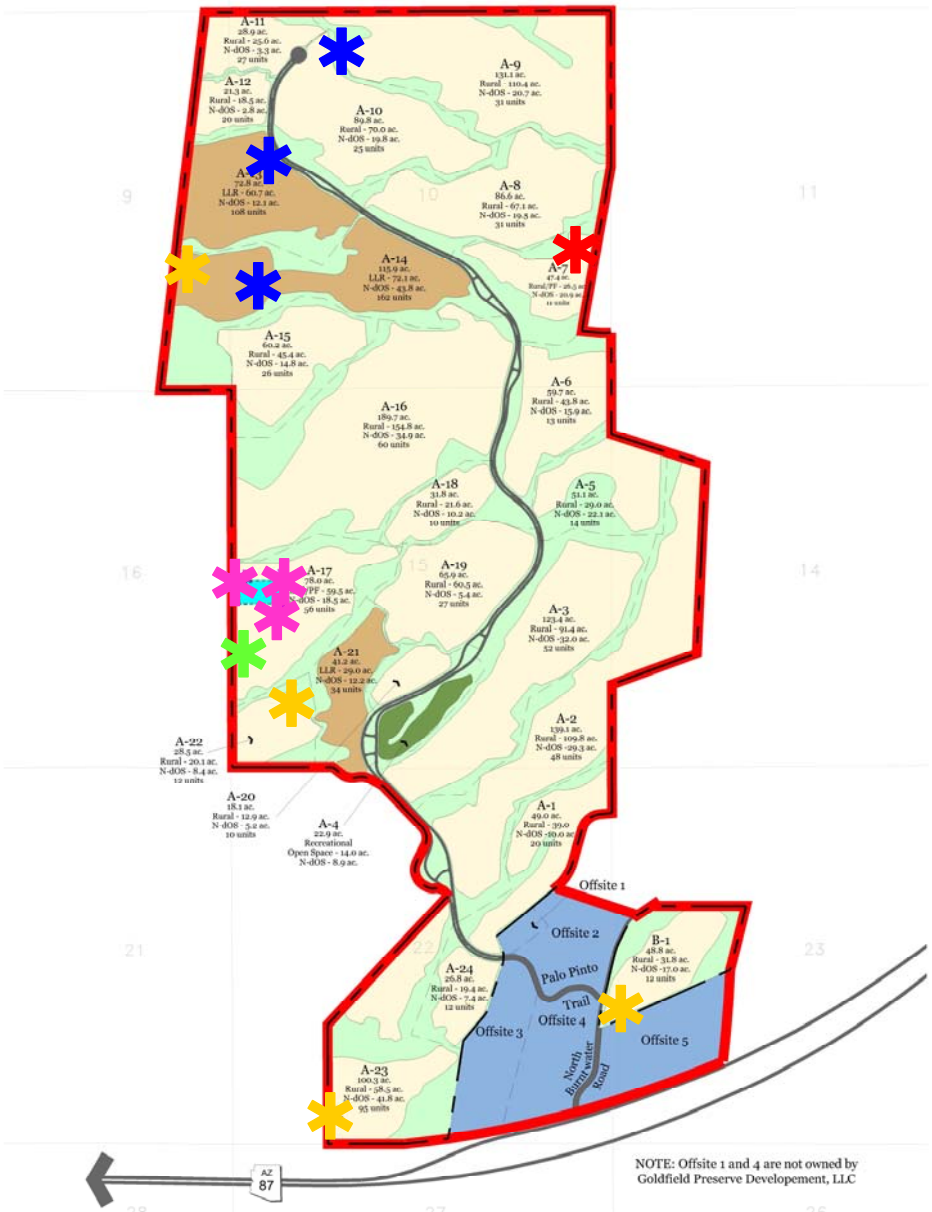
- Legal access to the proposed site for construction and operation



Proximity to Waterways

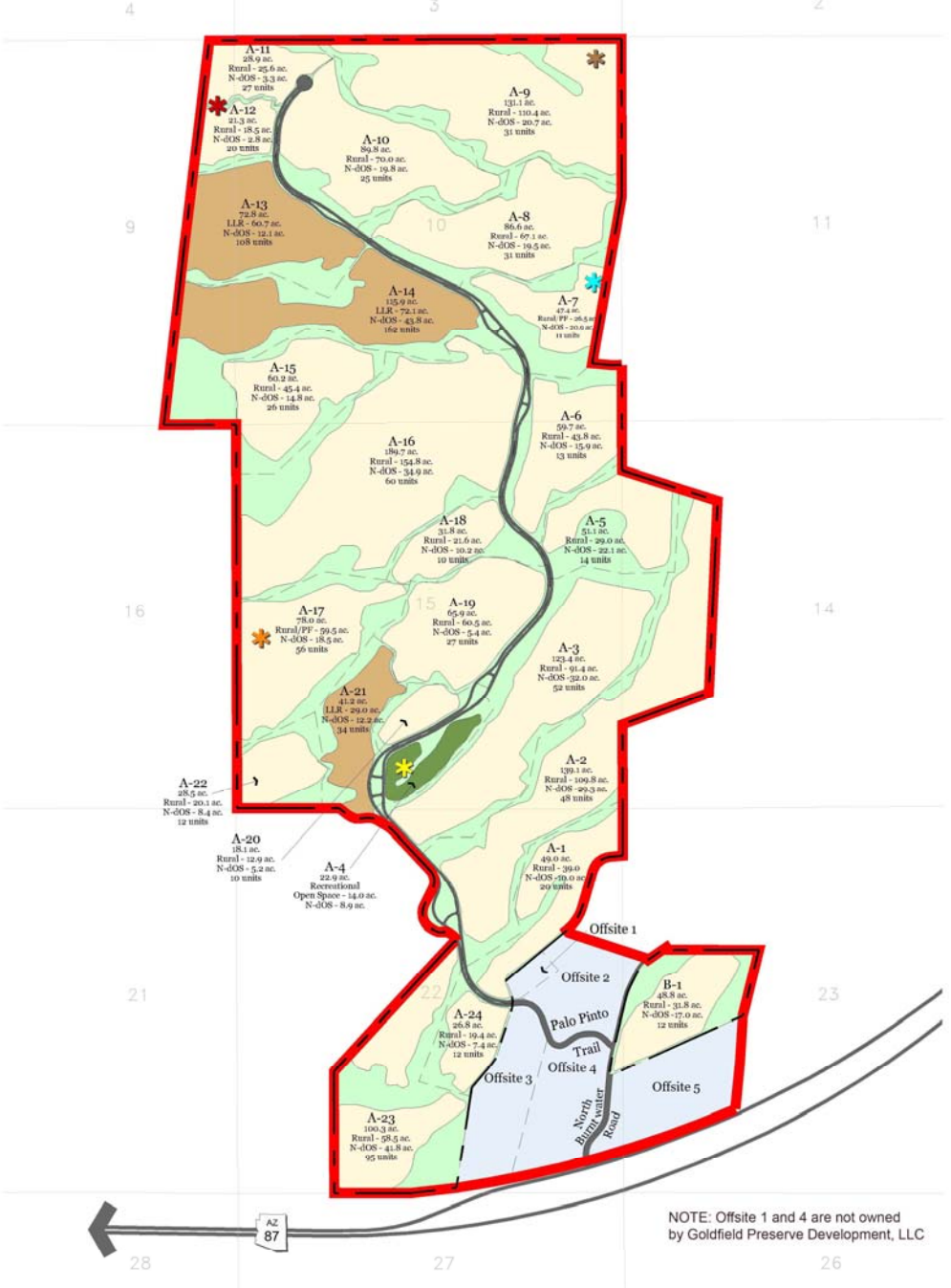
Site Facilities

- Groundwater Well Site
- Monitoring Well Site
- Recharge Well Site
- Water Campus
- Lift Station



Responsive Modifications

- Increase in service area from 1,680 acres to 1,902 acres
- Population served of 3,283 persons
- Maximum WRF capacity of 0.4 MGD sufficient
- Effluent recharge and reuse to the maximum extent feasible
- Increased operation and maintenance cost range from $150,000 – $200,000 to $250,000 – $300,000 annually



Responsive Modifications

- Comment: Address inconsistencies between 208 Application and other submittals
- Response: Application modified to ensure consistency

Document	Gross Area (acres)	Dwelling Units	Population	Average Day Flow (MGD)
MAG 208 Plan Amendment (October 2007)	1,679.6 (Parcel A only)	983 (with potential spa/resort)	3,146	0.392 (based on 100 gpcd* and gross acreage)
Master Wastewater Report Amendment (January 2008)	1,902.1 (Parcels A & B and offsite areas)	1,026 (with potential spa/resort)	3,283	0.309 (based on 80 gpcd* and net acreage)
MAG 208 Plan Amendment (March 2008)	1,902.1 (Parcels A & B and offsite areas)	1,026 (with potential spa/resort)	3,283	0.367 (based on 100 gpcd* and net acreage)

* 80 gallons per capita per day (gpcd) used for pipeline design per AAC

* 100 gpcd used for treatment plant design per County requirements

Tribal Communication

2005 – 10/22/2007

Date	From	To	Description
8/19/2005	Goldfield	FMYN	Telephone conversation - request for meeting
8/25/2005			Meeting with FMYN
11/17/2006	Goldfield	FMYN/SRPMIC	Early Notification Letter DMP Amendment
11/21/2006	Goldfield	FMYN	Telephone conversation
11/22/2006	Goldfield	FMYN	Land use plan correspondence
12/5/2006	Goldfield	FMYN	Telephone conversation
12/6/2006	Goldfield	FMYN/SRPMIC	Early Notification Site Posting, DMP Amendment correspondence
1/26/2007	Goldfield	FMYN	Master Water Report correspondence
1/29/2007	Goldfield	FMYN	Master Water and Wastewater Master Plan correspondence
2/8/2007	Goldfield	FMYN/SRPMIC	Community Open House Meeting Notification Letter, DMP amendment
2/10/2007	Goldfield	FMYN/SRPMIC	Goldfield monthly newsletter
2/21/2007	Goldfield	FMYN	Meeting with Dr. Carole Klopatek
2/21/2007			Goldfield Ranch Homeowner's Association meeting
2/26/2007	Goldfield	FMYN	Master Water Plan correspondence
2/28/2007			Neighborhood open house
3/1/2007	Goldfield	FMYN	Follow up telephone conference regarding Water Master Plan
3/8/2007	Goldfield	FMYN	Follow up telephone conference regarding Water Master Plan
3/16/2007			Goldfield monthly newsletter
4/4/2007	Goldfield	FMYN	DMP second submittal correspondence

Tribal Communication

2005 – 10/22/2007 (continued)

Date	From	To	Description
4/9/2007	Goldfield	FMYN	Provided hard copy of second submittal of DMP
4/12/2007	Goldfield	FMYN/SRPMIC	Goldfield monthly newsletter
5/14/2007	Goldfield	FMYN	Transmittal of Draft 208 Plan
5/29/2007	Goldfield	FMYN/SRPMIC	Neighborhood open house invitation
6/11/2007			Neighborhood open house
6/27/2007			Neighborhood open meeting
7/18/2007	Goldfield	FMYN	Transmittal of third submittal of DMP
8/15/2007	Goldfield	FMYN	Transmittal of archaeological report
9/25/2007	FMYN	Goldfield	Letter indicating no comments at this time
10/2/2007	FMYN	MCESD	Comments from FMYN
10/8/2007	Goldfield	FMYN	Response to comments
10/9/2007	Goldfield	SRPMIC	Transmittal of Draft 208 Plan to SRPMIC
10/10/2007			Meeting with FMYN
10/22/2007			**WQAC Meeting**

Tribal Communication

10/23/2007 – 12/21/2007

Date	From	To	Description
10/30/2007	Goldfield	SRPMIC	Offer to meet
11/19/2007			Meeting w/ SRPMIC
11/20/2007	Goldfield	SRPMIC	Confirmation of 11/19/07 meeting, Goldfield Ranch 208 MAG Amendment letter
11/28/2007			Meeting with FMYN Tribal Council
12/4/2007	Goldfield	MAG	Supplemental materials requested
12/4/2007	SRPMIC	MAG	Comments from SRPMIC (2 parts)
12/5/2007	FMYN	MAG	Report of 11/28/07 meeting
12/5/2007	Goldfield	FMYN	Transmittal of 12/4/07 CMX letter to MAG
Undated	SRPMIC	Goldfield	Request for additional information
12/13/2007	Goldfield	MAG	Response to 12/4/07 SRPMIC comments
12/17/2007	FMYN	MAG	Comments from FMYN
12/20/2007	SRPMIC	MAG	Letter of concerns
12/21/2007			**Second WQAC Meeting**

Tribal Communication

12/22/2007 – 3/20/2008

Date	From	To	Description
1/11/2008	SRPMIC	Goldfield	Preliminary comments from SRPMIC
1/15/2008	Goldfield	FMYN	Transmittal of zoning and pre-plat applications
1/17/2008	Goldfield	SRPMIC	Plan for January meeting
1/17/2008	FMYN	Goldfield	Request for meeting
1/18/2008	Goldfield	FMYN	Response to comments and request for meeting
1/28/2008	FMYN	Goldfield	Request for meeting
1/29/2008			Meeting with SRPMIC
1/30/2008	Goldfield	FMYN	Request for meeting
1/30/2008	Goldfield	SRPMIC	1/29/08 meeting summary
2/11/2008	Goldfield	FMYN	Request for meeting
2/13/2007	Goldfield	SRPMIC	Community Open House Meeting Notification Letter, RUPD rezoning and Preliminary Plat Applications
2/13/2008	Goldfield	FMYN	Request for meeting and list of documents provided
2/27/2008			Meeting with FMYN
2/28/2008	Goldfield	FMYN	2/27/08 meeting summary and response to comments
3/10/2008	SRPMIC	MAG	Memorandum of concerns
3/17/2008	SRPMIC	Goldfield	Letter of concerns
3/20/2008			**Third WQAC Meeting**

Tribal Communication

3/21/2008 – 4/9/2008

Date	From	To	Description
4/7/2008			Meeting with FMYN
4/8/2008			Meeting with FMYN
4/9/2008			**MAG Management Meeting**

Fort McDowell Yavapai Nation

P.O. Box 17779, Fountain Hills, AZ 85269 Phone (480) 837-5121 Fax (480) 837-1630

President Dr. Clinton Pattea Vice President Bernadine Burnette Treasurer Pamela Mott
Council Member Paul Russell Council Member Ruben Balderas Council Secretary Pansy Thomas

April 8, 2008

Mr. Dennis Smith
Maricopa County Association of Governments
302 N. 1st Ave.
Suite 300
Phoenix, AZ 85003

RE: Retraction of My Letter of April 7, 2008 on Small Plant Review at Goldfield

Dear Mr. Smith:

Please disregard the letter referenced above as it was signed by error on my part. The Fort McDowell Yavapai Nation has not approved the MAG 208 Amendment related to the wastewater reclamation facility for the proposed project at the Preserve at Goldfield Ranch.

Unfortunately I signed this letter in error while signing other documents not realizing that the content addressed a position the Tribal Council has not approved or that the letter was on letterhead from the previous Council.

Please accept my apologies for any confusion generated by that letter

Sincerely:

Dr. Clinton M. Pattea
President

cc: Don Kile
Goldfield Preserve Development
MAG Member Agencies

SALT RIVER PROJECT
WATER RIGHTS & CONTRACTS
Mail Station PAB110
POST OFFICE BOX 52025
PHOENIX, ARIZONA
85072-2025
(602) 236-5689

David C. Roberts
(602) 236-2343

April 8, 2008

Charlie McClendon, Acting Chair
MAG Management Committee
302 North 1st Avenue, Suite 300
Phoenix, Arizona 85003

Dear Mr. McClendon:

It has come to our attention that on March 20 several members of the Water Quality Advisory Committee had questions related to the extent of the playa deposit (Pemberton Formation) purported by the applicant to extend below The Preserve property. Although SRP has not taken an active role in the MAG 208 amendment process, we do have an opinion on the extent of this playa deposit as it relates to pumping associated with the water supply wells being proposed for The Preserve.

After reviewing the applicant's hydrology report used to support its Application of Analysis of Assured Water Supply, a report by Skotnicki and others (Arizona Geological Survey) and the geologic logs for sixteen wells in the vicinity of The Preserve, it is SRP's opinion that the playa deposit does not underlie the entire basin, or the entire property in question. Figure 3 of the Skotnicki report (attached) shows the eastern extent of the playa (horizontal hatched area) to terminate along a north-south line within the Fort McDowell Indian Reservation. SRP conducted it own review of 16 well logs to better define the extent of the playa and believes that it extends into The Preserve, but only into northwest corner of the property. Of the sixteen wells reviewed, only two encountered clay. There were no clay deposits in the other thirteen well logs. That leads SRP to conclude that the applicant's argument that the playa forms a barrier is flawed, and that there is a hydraulic connection between the aquifer and the subflow of the Verde River.

I hope this helps to clarify SRP's opinion.

Sincerely,

David C. Roberts

David C. Roberts
Salt River Project

Cc: Shannon Harper, Salt River Pima-Maricopa Indian Community
Don Kile, The Preserve
Dr. Carole Klopatek, Fort McDowell Indian Community

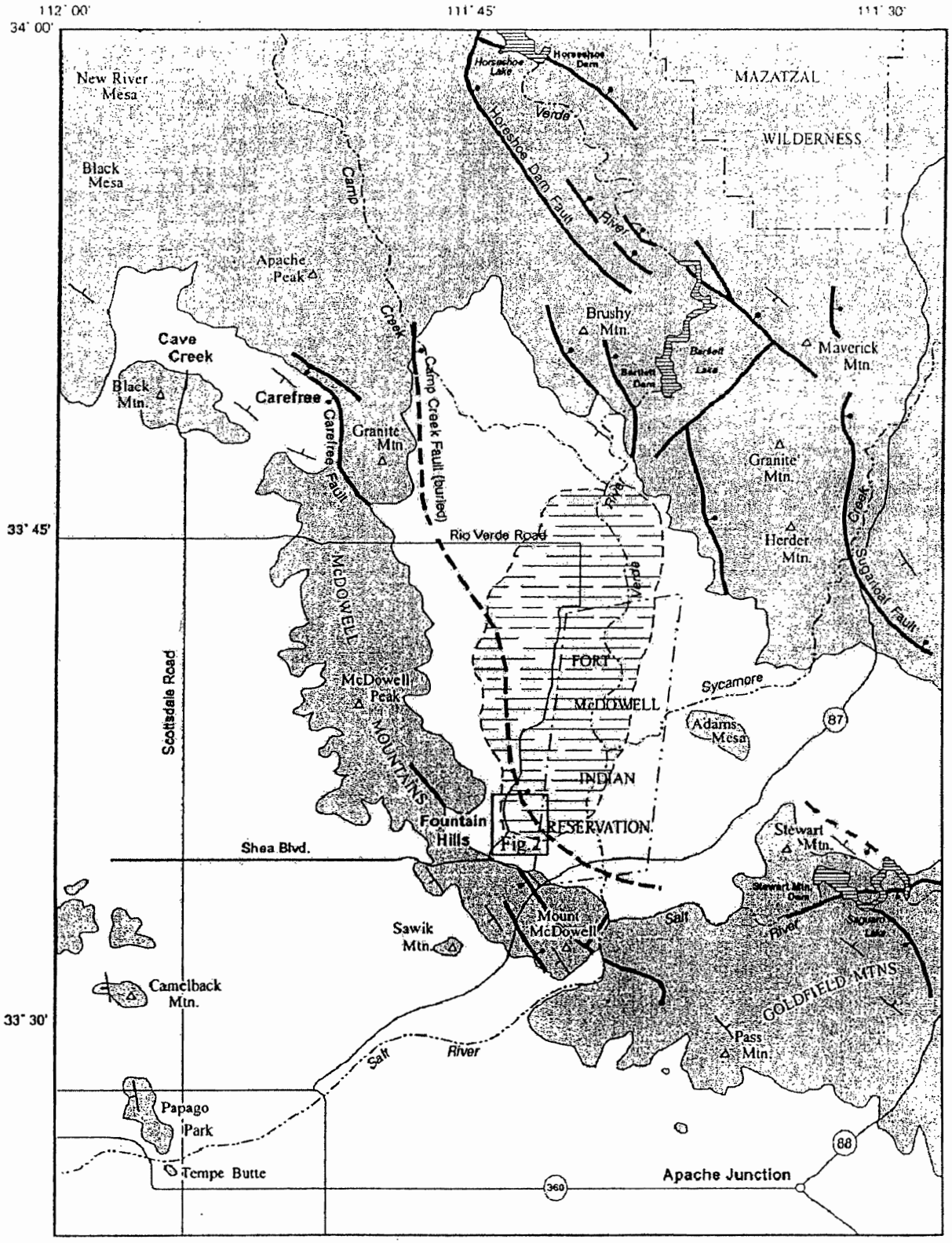


Figure 3. Probable distruction of playa deposits (informally called the Pemberton Ranch Formation) in the Lower Verde River valley.

Julie Hoffman

From: Azdebs@aol.com

Sent: Tuesday, April 08, 2008 2:15 PM

To: Julie Hoffman

Cc: haines@agilebroadband.com

Subject: comments regarding Preserve Sewage plans for Wednesday April, 9

Deborah J Sedlmayer
22027 E. Larkspur Drive
Goldfield Ranch
Fort McDowell, AZ 85264

I am alternately amazed and frustrated by Ellman's representatives frequent slide shows that are, for the most part, unchanged in the last two years. They have put an "X" on the map indicating where the sewage treatment plant will be located but not the details of the facility. This plant is placed in such a manner that expansion is impossible. When questions are asked, they simply shuffle their presentation and display the same old tired slides and "experts" in different order. They continue to fail to answer basic questions. Instead they attempt to distract with the same old dog and pony show.

It is time for my government to stop the slide show and demand answers with detailed substance. This is not a game of "he with the most slides wins". The Ellman group may be planning a responsible development, of which we would be in favor. We cannot reach a decision with sketchy ideas and dreams. We, and indeed you, must have concrete plans to determine if their plans will harm our air quality. How can we decide without details if our water quality and quantity will be assured and never compromised. These questions are important to the National Forest, The Nations and their neighbors at Goldfield, now and in the future.

Now is the time to stop letting them drift through the process. Now is the time to demand detailed answers to all the questions. Stop the shuffle slide show and protect the valley's water, The Nations, our National Forest and our neighborhood. We deserve nothing less.

GOLDFIELD CONCERNED CITIZENS' ASSOCIATION

Kathy Haines, President, Phone: 480 980 4661
12140 N. Sin Vacas Trail, Ft. McDowell AZ 85264

April 8, 2008

Ms. Julie Hoffman
Maricopa Ass'n of Governments
302 North 1st Avenue Suite 300
Phoenix, Arizona 85003

Re: Agenda Item # 8, MAG Management Comm. Meeting April 9
Preserve at Goldfield Ranch, MAG 208 Small Projects Review

Dear Ms. Hoffman:

Please circulate this letter to all members of the MAG Management Committee and the MAG Regional Council with respect to the consideration of the Preserve and Goldfield Ranch Water Reclamation Facility as part of the MAG 208 Water Quality Management Plan.

Executive Summary:

- **Analysis of Nearby Areas Must be Done.** The MAG 208 Water Quality Management Plan requires an analysis of whether certain areas lend themselves to being included in the service area, and whether nearby areas should be sewered for water quality or economic reasons. This analysis has not been done, and the requested permit should not be approved until it is.

- **Nearby Areas Could Be Included and Should Be Sewered.** And in fact, many nearby areas do lend themselves to being included in the service area, and a number of them must be sewered. This would require expansion of the plant. This analysis has not been done.

- **Plants Should Be Designed for Future Expansion; This Plant Is Not.** A fundamental purpose of the MAG 208 Water Quality Management Plan is to plan for the **future** of the **region**, so that when plants are built they are designed to accommodate future needs. The Goldfield Preserve's application only considers the needs of this particular development. Even if this plant is appropriate for this development now, it should be located where it can be expanded to meet the needs of future development. But Goldfield Preserve has located its plant where it cannot be expanded to meet future needs. The Preserve's application should not be approved until the plant is designed and sited so it can be expanded to meet future needs of the region.

1. The Application Fails to Consider All Relevant Adjacent Parcels.

The planning criteria set forth in Table 4.53 for a Small Plant Application outside of a municipality require the applicant to address whether certain areas lend themselves to being included in the service area, whether nearby areas should be sewered for water quality or economic reasons, and whether nearby areas wish to join the proposed plant. The reason for these requirements is to prevent "an uncontrolled proliferation of small plants that could cause problems in the future." MAG 208Water Quality Management Plan Update at 4-224. None of these three requirements has been satisfied by the Goldfield Preserve's application.

The application only considers "the relatively small parcels of private land (1 to 5 acre lots) in the original Goldfield Ranch community," which "are already developed and operating individual septic systems" (¶ 3.2.2). It then goes on to state that it would not be feasible for most of those small lots to be sewered or included in the service area. But the underlying premise is both *incomplete* and *inaccurate*, and therefore the analysis fails to satisfy these technical requirements for a Small Plant Review and Approval.

a. The Plan Fails To Consider Grayhawk's 80-Acre Parcel. The analysis is incomplete because it fails to address the 80 acre parcel lying immediately adjacent and **west** of Parcel A of the Preserve development. This parcel is owned by Grayhawk Development, who has filed with the County a conceptual development plan for development at a density of up to two homes per acre. That development plan is attached as Exhibit A, and the location of the parcel is shown on Exhibit D.

At Grayhawk's planned density, the 80 acres would have to be sewered because Maricopa County does not permit septic tanks on half-acre lots. And it would be entirely feasible to sewer these lots and connect them to the Goldfield Preserve WRF. As Grayhawk's plan states, its 80 acres consists of "flatter terrain and lower elevations of 1,550 – 1600." This flatter terrain slopes gently from the Preserve's WRF, which is at 1600 feet elevation.

Yet Grayhawk's 160 homes would by themselves generate 51,200 gallons per day of wastewater, and this amount alone would exceed the capacity of the Preserve's proposed plant. The plant is designed to handle only 400,000 gallons per day, and the Preserve's plan has already committed 367,000 of that. Preserve Application at 3.

b. The Plan Fails to Consider FMYN's 600 Acres to the West. The analysis also fails to consider the 600 acres immediately adjacent on the western boundary of the Preserve. This land is owned by the Fort McDowell Yavapai Nation in fee, not as part of its reservation. The FMYN has filed letters with the County stating its desire to have these acres planned for "overall residential density on the 600 acres of up to two homes per acre," plus "up to 50 acres" of commercial use along State Route 87. FMYN Letter of May 18, 2007, attached hereto as Exhibit B, at 3. That letter also notes that the 600 acres "have extensive direct access to the Beeline Highway and have more favorable topography for development." *Id.* at 5. Indeed, it notes the Ellman's Preserve development plan "places all of the high density residential development on the western portion of its property (adjacent to the Nation's reservation, its 600 acres, and Greyhawk Development's 80 acres), with densities "as high as 2.01 homes per acre."

The flatter terrain in that area is why the higher densities are proposed to be located there, and the FMYN's 600 acres share that same flatter terrain.

Obviously a density of two homes per acre would have to be sewered. And Goldfield Preserve has already noted that it would not make sense, nor be environmentally safe, to transport raw sewage across the Verde River to reach the existing FMYN sewage treatment plant. Consequently development of the 600 acres would either require its own additional small plant, or connection to the Preserve's small plant. But of course the 1,200 homes alone would generate 384,000 gallons per day, which would require **doubling** the size of the Preserve's treatment plant, and that does not include the 50 acres of commercial uses the FMYN plans.

For two fundamental reasons, the failure to analyze these potential future needs is not excused by the fact that the FMYN does not currently plan to develop those acres. First, whether nearby areas "wish to join the proposed plant" is a separate analysis that the MAG 208 Water Quality Management Plan requires to be provided. In addition to providing that analysis, the Plan also requires the applicant to answer: "Can the proposed plan be expanded to serve growing population, " and "Would certain areas lend themselves, topographically or hydrologically, by planned use or density to being included in the service area?" The Preserve application answers neither of those questions. Second, the FMYN's current development plans are not controlling because these fee lands could be sold to another developer. So the real question that must be answered is not just the current owner's intentions, but how a future owner/developer would logically want to develop the land. And with topography much like the western portion of the Preserve and greater access to the State Highway, it is logical to expect that such a future developer would want the same density as the western portion of the Preserve, *i.e.,* two homes per acre.

c. Plan Fails to Consider Parcels C, D and 18 Acres Commercial. The plan also fails to consider whether the plant should be designed to accommodate future development of Parcels C and D and the intervening 18 acres of commercial planned development. As noted above, the application contains not one word of analysis whether this acreage and development plans lend themselves to being included in the service area. This is because the entirety of the analysis is limited to the "relatively small parcels of private land (1 to 5 acre lots)" that are "already developed and operating individual septic systems." Preserve Application ¶ 3.2.2 and Fig. 4. The large parcels south of the Beeline are never mentioned, much less analyzed for feasibility to connect to the planned sewer system.

Parcels C and D are planned by Ellman Companies to include 84 homes. These homes would generate 26,800 gallons of sewage per day, which by themselves would bring the planned facility within 98% of its capacity. And the 18 planned commercial acreage lying between C and D would have to be sewered, and it would exceed the plant's capacity. Ellman Companies successfully fought to maintain the validity of the development master plan with those commercial acres included.

Moreover, the feasibility of connecting this acreage to the Preserve sewage plant has already been determined, and approved by Maricopa County. In 1995 Maricopa County approved a development master plan for this acreage, which included a sewer system connecting

to a sewage treatment plan in the Preserve. The design of that system is attached as Exhibit C. And, again, Ellman Companies was successful in maintaining the validity of that plan.

d. Plan Fails to Consider Ellman's Other Parcels. Indeed, the plan even fails to consider the potential future development of another 193 acres owned by Goldfield Preserve Development in the immediate vicinity – Parcel E and the airstrip parcel. And it would be a simple matter to run a sewer line from the southwest corner of the 60-acre airstrip parcel down Sin Vacas Trail and Burntwater to connect with the sewer line serving Parcel B, because that is all a gentle downhill slope.

At minimum, Goldfield Preserve Development should be required to declare its development intentions for **all** of the acreage it owns in Goldfield Ranch that is outside of the Preserve. It has not included any analysis of the 60-acre airstrip parcel and the 133-acre Parcel E, and when it counted the "offsite" parcels lying south of Parcel B it did so only according to the existing R-190 zoning. Yet Goldfield Preserve Development President Don Kile has stated publicly that he might seek to rezone at least one of those parcels to R-70, and has refused to commit not to seek rezoning for the airstrip parcel.

Because the 208 MAG Plan requires an application to determine the development intentions of neighboring landowners, this would seem to require, at a minimum, that an applicant disclose his own intentions for neighboring parcels he owns. And it is evasive at best for such an applicant merely to assume development under existing zoning, without disclosing any intentions he may have to seek rezoning for higher density. This is supposed to be a planning function, not a game of hide-the-ball.

e. Plan Fails to Consider Seven Other Large Nearby Parcels. Finally, the plan contains no analysis of another seven nearby parcels that are 40 acres or larger. One of these parcels, consisting of 42 acres, is immediately adjacent to the Preserve. And 214 acres are immediately adjacent to State Highway 87. These could easily be connected to the sewer system by running the sewer lines down the highway, which is a gentle downgrade with no intervening hills or valleys, to the parcels that are included in the plan near the Burnt Water entrance. Even under the current R-190 zoning, these 339 acres could be developed with 77 homes, which would produce 24,880 gallons per day, and would by themselves almost exhaust the plant's planned capacity.

A graphic demonstration of all of the large nearby parcels that the application fails to consider is attached as Exhibit D. If Parcels C and D and the FMYN and Grayhawk parcels are developed according to the plans that have been disclosed in other contexts, these four parcels alone would accommodate 1,244 homes. If the other large 40+ acre parcels were developed under the current R-190 zoning, these 629 acres would accommodate another 144 homes. The total of 1,388 homes would generate 444,245 gallons of sewage per day. To handle that, the proposed plant would have to be more than doubled in size.

2. The Preserve Sewage Plant Cannot Be Expanded.

One of the key planning criteria that the MAG 208 Water Quality Management Plan requires to be answered is: **"Can the proposed plant be expanded to serve growing population?"**

The Preserve's application is deficient because it does not address this question at all. The application evades answering whether the plant could be expanded by asserting that because the planned service area is "bordered on the east by the relatively small parcels of private land (1 to 5 acre lots)," it is the developer's opinion that "the plant capacity calculations would not likely be exceeded." Application ¶¶ 3.2 & 3.2.2. As noted above, the premise is both false and incomplete because there are large parcels to the east and because it fails to consider the 680 acres to the west. But even if the premise were true the statement does not satisfy the MAG 208 planning requirement, to analyze whether the plant could be expanded.

Perhaps the reason this fundamental planning question is not answered is because the plant is located where it **cannot be expanded**. Attached as Exhibit E1 is a topographic map showing the location of the facility, and E2 is the same map overlaid by the site plan for the facility. The plant is located on a narrow ridge that drops off by 30 feet on three sides, and at the bottom of those dropoffs are 208 jurisdictional washes. And the fourth side of the ridge is too narrow to hold more than the road to the plant, and not any expansion.

To allow for any expansion of this plant, it would have to be relocated. It would probably be just as feasible to locate it where it was in the 1995 Development Master Plan, at the southwest corner of section 15. According to the 1995 DMP, that site "can service the largest area of the site by gravity flow," and was large enough to accommodate a plant with a million-gallon-per-day capacity. It should not be any more expensive for Goldfield Preserve Development to locate its plant there, and it would allow for it to be expanded by 2 ½ times the capacity.

3. Conclusion.

There is no incentive for any developer to design a sewage treatment plant of greater capacity than necessary to serve his particular development, or even to design one that could be expanded in the future. Nor is there any incentive for any developer to adjust his plans to accommodate neighboring development that might occur in the future.

But that is exactly why the MAG 208 Water Quality Management Plan **requires** developers to analyze potential nearby developments, and to tell MAG whether their sewage treatment plant could be expanded. Both of these requirements are necessary so that MAG can accomplish its regional planning function, and so that, if appropriate, the plant be located somewhere else to accommodate future population, in order to avoid "an uncontrolled proliferation of small plants that could cause problems in the future."

This application has failed even to attempt to satisfy those requirements. And they cannot be satisfied now by the developer's lawyer stating there is a "lot of topography" that

makes it infeasible for other parcels to be served. These are engineering questions, not legal questions, so it will take engineering analysis to provide MAG with appropriate answers.

This does not mean that MAG must ultimately deny Goldfield Preserve Development a permit to construct its planned sewage treatment plant. It does not even mean that MAG must require GPD to build a larger plant. And it certainly does not mean that MAG must require this developer to provide sewage treatment service to neighboring parcels.

All it means is that MAG must require the applicant to provide the analysis that is required by the MAG 208 Water Quality Management Plan. And even if that analysis shows the plant should be moved so that it could accommodate future expansion, that should not cost the developer any more than its present location. This developer will not be responsible to pay for the future expansion – that can be accomplished by the Domestic Water Improvement District after the Preserve is built out. It can annex adjoining land and levy taxes to pay for any necessary expansion.

In light of these serious deficiencies, this application should not be approved until it contains all the analysis that is required by the MAG 208 Water Quality Management Plan. Without them, it does not comply with that plan and cannot be approved.

Sincerely,

Randolph J. Haines

Kathy and Randy Haines
President and Secretary
Goldfield Concerned Citizens' Association

Attachments: A – Grayhawk's conceptual development plan for 80 acres
B – FMYN's development plans for 600 acres
C – 1995 DMP sewage plan for Parcels C and D and 18 acres commercial
D – Graphic of nearby parcels > 40 acres
E – Topo showing plant location

cc: Hon. Supervisor Don Stapley
Wesley A. Shonerd, P.E.
Dr. Carol Klopatek, FMYN
Mr. Kevin Chadwick, P.E., Division Manager

Grayhawk™
Development

March 6, 2007

Matt Holm
Principal Planner
Maricopa County Planning and Development Department
501 North 44th Street, Suite 200
Phoenix, AZ 85008

Re: Goldfield Ranch, Phase III, Lots 13 and 14

Dear Matt:

Grayhawk Development is the developer for Goldfield Ranch, Phase III, Lots 13 and 14, which are owned by Four Peaks Holdings, LLC. The site area is approximately 80 acres and is currently zoned Rural-190. Grayhawk is creating a conceptual development plan for this area. We request that our plan be incorporated into the Maricopa County Eye To The Future 2020 Goldfield Area Plan that is currently being updated by the County Planning and Development Department. We propose that the future land use for Lots 13 and 14 to be designated as 1-2 units per acre. Please reference the enclosed illustrative development plan.

- **Location**

Goldfield Ranch is located on State Route 87 approximately five miles east of Fountain Hills. Lots 13 and 14 of Phase III are each 40 acre parcels located on the western edge of the Goldfield Ranch community. The 600± acres adjacent to the west are privately owned by the Fort McDowell Yavapai Nation and were acquired in the 1990s through a land exchange with the United States Forest Service. The adjacent property to the north, east and southeast is approximately 1,600± acres known as The Preserve at Goldfield Ranch and is owned by Goldfield Preserve Development, LLC. This owner recently submitted a request to amend the Development Master Plan that was approved for this property in 1995. Please reference the attached location map.

- **History**

Since 1993, the mission of Grayhawk Development has been to create unique projects that enhance the quality of life for our residents while at the same time honoring the intrinsic value of the natural Sonoran Desert environment and the history of the land. With focus on this purpose, Grayhawk has developed master planned communities of uncompromising quality, beauty and sensitivity.

7377 East Doubletree Ranch Road • Suite 100 • Scottsdale, Arizona 85258-2038
Phone: (480) 998-2661 • Fax: (480) 998-4706
www.grayhawk.com

Exhibit A

Grayhawk Scottsdale is a 1,600 acre master-planned community that embraces a broad mix of housing types, two championship golf courses, numerous neighborhood parks, 31 miles of multi-use trails, schools, retail shopping, dining, medical campus, office and commercial development with neighborhoods that people want to call home. The distinctive landscape and architectural palette of this community complements and respects the natural desert environment.

Whisper Rock Estates/Sevano Village is a 1,000 acre community in north Scottsdale comprising two golf courses and 400 units consisting of townhomes, villas, semi-custom homes and custom home sites ranging from one to almost five acres. This extreme low density environment offers timeless natural beauty and allows the neighborhoods to blend seamlessly with the desert surroundings.

Grayhawk Development is familiar with the Goldfield Ranch area. We became enticed with the rural character and charm of the area in 1997 when we first had the opportunity to purchase the Preserve at Goldfield Ranch. Grayhawk's planning and engineering team spent well over two years evaluating the Preserve property and is extremely familiar with the entire site. While Grayhawk was not successful in acquiring this property, we did purchase Lots 13 and 14 in 2000.

Since 1993, Grayhawk Development and their representatives have made it a priority to communicate with the local neighbors and neighborhood organizations regarding any of their development plans.

- **Request**

Our various development plans for the 80 acres in Lots 13 and 14 results in 1-2 units per acre with a minimum of 20 to 25 acres (30%) of open space. We request that our plan be incorporated into the current update for the Goldfield Area Plan and reflect the land use for Lots 13 and 14 as 1-2 units per acre. Access to the 80 acres will be via existing dedicated roadways shared with the Preserve development and other Goldfield Ranch property owners. We believe our plan is consistent with the goals, objectives and policies identified in the Goldfield Area Plan, Draft 1 dated January 2007. We are committed to an efficient land development plan that is compatible with adjacent land uses, sensitive to the natural desert environment and that sustains the rural character, charm and lifestyle of the area.

- **Environmental Conditions That Support Goldfield Area Plan Goals, Objectives and Policies**

Topography and Slope Conditions. The topography for the general Goldfield Ranch area slopes from the northeast to the southwest where Phase III, Lots 13 and 14 are located. The elevation ranges from a high of 1,800 + in the northwest to 1,500± feet in the southwest portion. The area is characterized as undulating terrain with short, steep slopes in the northeast and shallower slopes to the southwest. The flatter terrain and lower elevations of 1,550 – 1,600 in Lots 13 and 14 provide more land area to accommodate 1-2 units per acre. The adjacent properties

surrounding Lots 13 and 14 to the west, north, east and southeast have similar topography and would also support 1-2 units per acre.

Vegetation. The Goldfield Ranch site is typical of the Sonoran Desert environment. **However, approximately 75% of the Lot 13 and 14 property was badly burned in a fire in the 1990s.** The Sonoran Desert plant palette features a diverse mix of desert trees, shrubs, ground covers and cacti. The remaining native plants on Lots 13 and 14 consist of small trees including Palo Verde, Catclaw and Mesquite; shrubs such as Creosote, Bursage, and Saltbush; and cacti including Saguaro, Barrel, Hedgehog, Prickly Pear and Cholla. The smaller shrubs and cacti are growing back fairly well in the years since the fire, while the larger trees and cacti are still struggling. Our development plan of 1-2 units per acre allows for significant revegetation of natural area open spaces and wash corridor areas. Grayhawk Development has expertise in revegetation and restoration of the natural desert environment through the course of construction at both Whisper Rock/Sevano Village and Grayhawk Scottsdale and will use this knowledge to restore the burned areas with a native indigenous plant palette.

Open Space. The existing wash corridors through Lots 13 and 14 will remain as open space and will be enhanced with native desert landscaping to create a riparian habitat. Enhancing the wash corridor landscaping provides an opportunity to extend open space connections to the adjacent properties. The plan for 1-2 units per acre incorporates approximately 20-25 acres (30%) of meaningful open space on the property.

Major Washes. Grayhawk Development and their planning and engineering team have carefully mapped the 404 washes and flood planes through the 80 acre site. The 1-2 units per acre development will allow for storm water to be conveyed through the existing washes on the property.

Lighting. The development plan for Lots 13 and 14 will incorporate design standards that minimize lighting to respect and preserve the dark, night skies. Street lights are not proposed for the property. Lighting will be restricted to low landscape light and wall sconces to provide safety lighting at night.

We believe that the existing and proposed entitlements adjacent to the three sides of the property (The Preserve DMP) as well as the environmental conditions outlined above substantiate our proposed development of 1-2 units per acre on Goldfield Ranch, Parcel III, Lots 13 and 14. We ask that the County Planning and Development Department support the change in the land use designation on these parcels to 1-2 units per acre and include our request in the Goldfield Area Plan update report.

Thank you for your assistance in this matter. Please contact us if you have any questions.

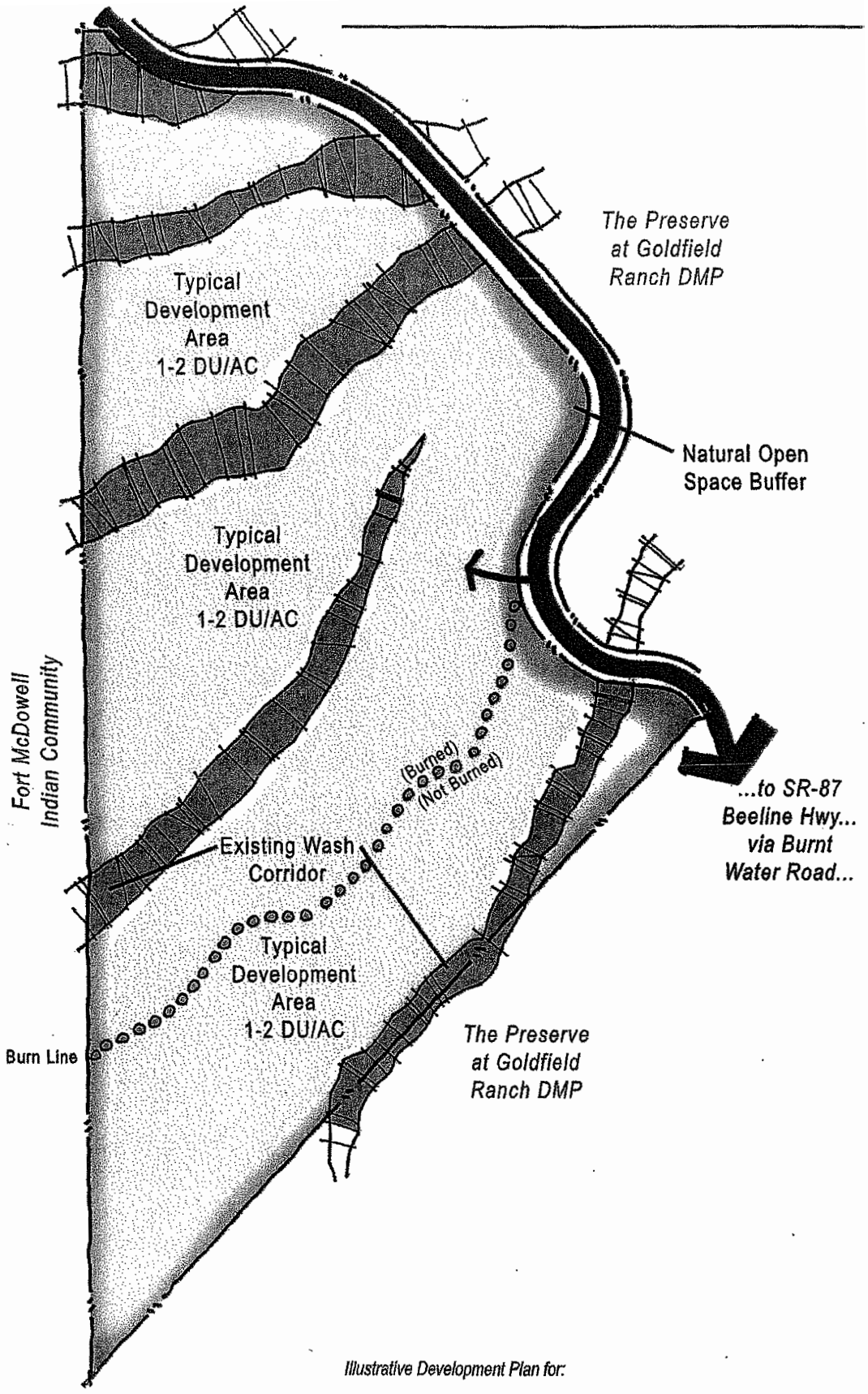
Sincerely,

GRAYHAWK DEVELOPMENT

Brian Baehr
Vice President

Enclosures

Cc via email: John Verdugo/Maricopa County Planning and Development, w/enclosures
Brian McCabe/Maricopa County Planning and Development, w/enclosures
Orlando Moreno/Fort McDowell Yavapai Nation, w/enclosures
Mark Horvath/Fort McDowell Yavapai Nation, w/enclosures
Randy Haines/Goldfield Ranch Concerned Citizens Group, w/enclosures
Tom Bruckman/Goldfield Ranch Homeowners Association, w/enclosures
Virgil Dutton/Goldfield Ranch Homeowners Association, w/enclosures
Tom Parsons/Goldfield Ranch Homeowners Association, w/enclosures
Joe Sedlmayer/Goldfield Ranch Homeowners Association, w/enclosures
Bob Waldo/Goldfield Ranch Homeowners Association, w/enclosures
Don Kile/Goldfield Preserve Development, LLC, w/enclosures
Wendy Riddell/Berry & Damore, LLC, w/enclosures



Illustrative Development Plan for:

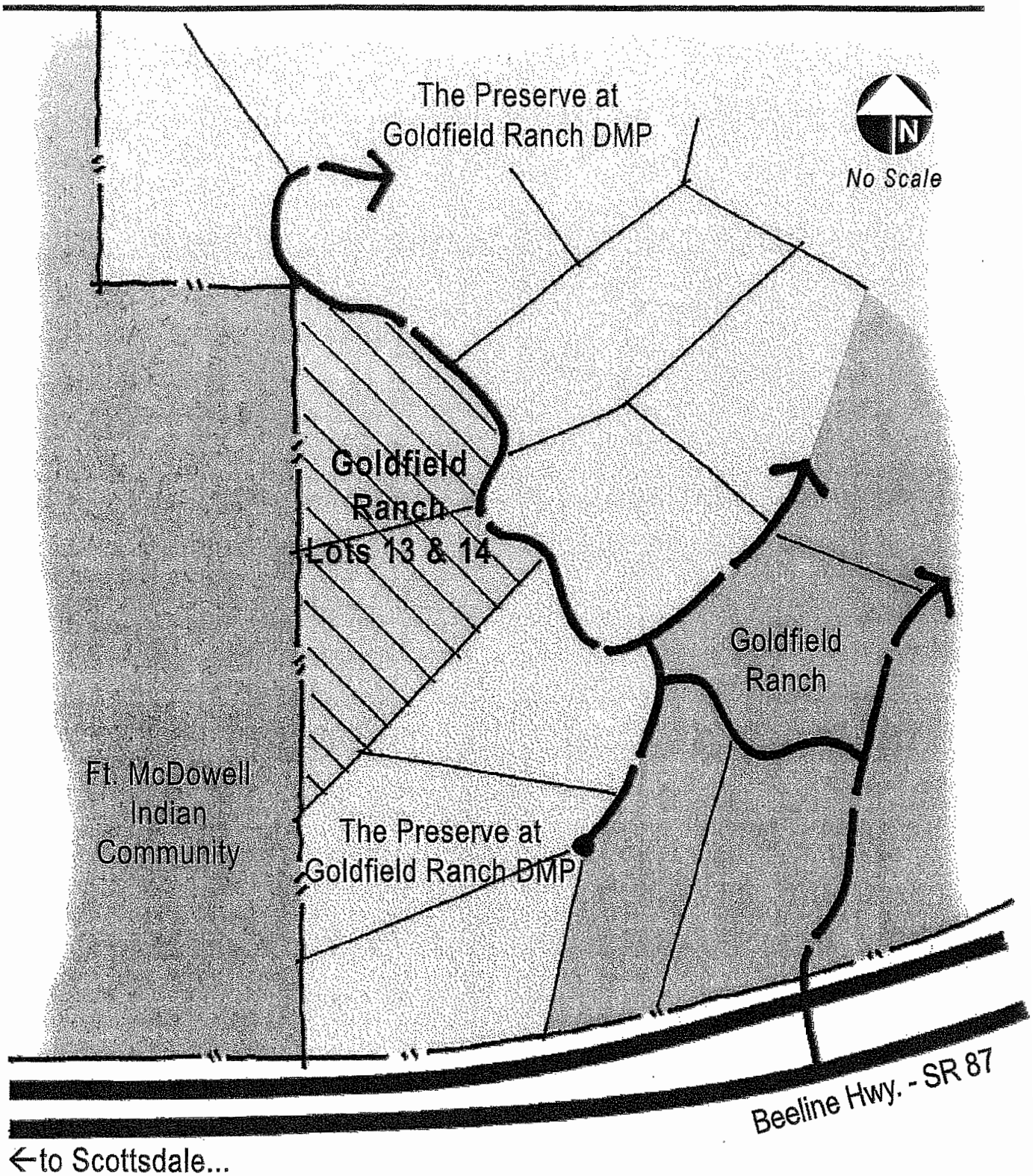
GOLDFIELD RANCH PHASE III - LOTS 13 & 14

TORNOW ASSOCIATES, P.C.
community planning
landscape architecture
www.tornowassociates.com

200' 100' 0 200'

Grayhawk Development
c/o Mr. Brian Bashr
7377 E. Doubletree Ranch Rd., #100
Scottsdale, Arizona 85261
(480) 998-2661
www.grayhawkdevelopment.com

Exhibit A



Location Map for

GOLDFIELD RANCH PHASE III - LOTS 13 & 14

HORVATH LAW OFFICE
16611 Frederick Circle
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Fax (402) 697-5543
E-mail: mhorvath@tconl.com

May 18, 2007 VIA EMAIL

Matt Holm
Principal Planner
Maricopa County Planning and Development Department
501 North 44th Street, Suite 200
Phoenix, AZ 85008

RE: COMMENTS FROM THE FORT MCDOWELL YAVAPAI NATION REGARDING THE DRAFT#2 OF THE GOLDFIELD AREA PLAN UPDATE 2005

Dear Mr. Holm:

As you know, I represent the Fort McDowell Yavapai Nation ("Fort McDowell" or "Nation"). I have reviewed Draft #2 Goldfield Area Plan Update 2005 ("Draft Area Plan"). Previously, Mr. Orlando Moreno submitted detailed comments on behalf of the Nation regarding Draft #1 in a letter dated March 27, 2007. I will not repeat all of those comments, but I have attached a copy of his comments to this letter.

Unfortunately, not one of my client's requests or objections have been incorporated or noted in the Draft Area Plan.

FORT MCDOWELL AND ITS CONSTITUENTS HAVE NOT BEEN ACCORDED FAIR CONSIDERATION

In your previous correspondence to me, you state that the overwhelming response from the public is to maintain the existing densities. However, that statement is not supported because the Nation's 600 acres, its residents, its employees, and its nearly 26,000 acres of trust land are all within the existing Goldfield Area Plan ("existing Area Plan"). Let me elaborate:

- The Nation represents approximately 930 Tribal Members.
- The Nation represents approximately 650 persons (including Tribal members, other Native Americans and non-natives) living on the reservation.
- The Nation employs approximately 1500 persons on or near the reservation. It is the largest employer in the area.

- The Nation's trust lands are adjacent to the Goldfield Ranch subdivision, and the Nation's 600 acres of fee land are located between the Nation and the Goldfield Ranch Subdivision.
- The Nation has requested increased residential density for its 600 acres.

Given the above facts, it is factually incorrect to state that the overwhelming response (or even a majority) favors maintaining the existing R190 Zoning for the Nation's 600 acres. The Nation and its constituents, who greatly outnumber the number of other comments received (e.g., 30 comments favoring the existing R190 zoning), have not been accorded appropriate consideration. In fact, there is no mention at all of any disagreement with the policy of R190 zoning in the Draft Area Plan.

The Nation and its residents are currently within the existing Area Plan. Therefore, the overwhelming majority of residents within the existing Area Plan (through their government) have indicated support for the Nation's requests. If the County staff feels that only the residents of the revised area should be given appropriate consideration, that recommendation could be in a report to the Planning and Zoning Commission and the Board of Supervisors. However, to be factually correct, the Draft Report should state that the majority of residents within the existing Area Plan support the Nation's request. If merely scant consideration will be given to the greatest population sector in this Update to the existing Area Plan, then all of the Nation's land should be removed from the Draft Area Plan (including its 600 acres of fee land).

It is also important to note that all of the comments in support of the R190 zoning are from the residents who live within the eastern portion of the revised planning area. The Nation's 600 acres are located on the far western portion of the revised planning area.

SUMMARY OF COMMENTS AND SUGGESTIONS

The Nation's positions are as follows:

I. Fort McDowell does not believe that the merits of substantially decreasing the planning area (thus excluding the Nation and its constituents) have been sufficiently justified or explained.

II. If the planning area is to remain substantially decreased, then the 600 acres owned in fee by Fort McDowell should be excluded from the revised small planning area. The Nation and its constituents have not been accorded fair consideration in this process, particularly when taking into consideration the number of its constituents, the economic importance the Nation plays in the region, and the impacts that any development at Goldfield Ranch will have on the Nation (See Exhibit B for several other examples). Moreover, the removal of the Forest Service lands (approx. 88,000 acres), the Nation's lands (approximately 24,000 acres), and other lands from the revised planning area is consistent with removing the Nation's 600 acres of fee lands (formerly Forest

Service lands). Out of basic fairness and the sound reasons stated in the Nation's earlier comments, the Nation's 600 acres should be excluded from this process.

III. If the 600 acres are not excluded, this planning process must be revised to properly involve the Nation as directed by both the existing Area Plan and the Draft Area Plan. The 600 acres were added late in this process. By the time the Nation became involved soon after its 600 acres were added late in the process, the County appeared to have decided its position on densities and other planning issues for the Nation's 600 acres.

In 1994-95, the County administered a number of workshop meetings with representatives from the primary stakeholders. That model should be considered again. Currently, the Nation is working with the Homeowners to determine if the parties can reach a mutual understanding. This process must be allowed adequate time to proceed. Therefore, the July planned meeting before the Planning and Zoning Commission should be postponed.

IV. If the 600 acres are not excluded and the process in not revised as suggested above, then the Draft Area Plan must not unduly restrict the land to the west of the Preserve, including Fort McDowell's 600 acres of fee land. For the reasons set forth below, the Nation requests that the policies for its 600 acres located on the far western side of the revised planning area allow, subject to other policies (e.g., water supply, sewer, protecting washes, etc.), the following:

A) a planning designation permitting a maximum overall residential density on the 600 acres of up to two homes per acre; and

B) a planning designation permitting a reasonable amount of commercial space based upon the population projections in the Draft Area Plan (up to 50 acres) along the four lane divided State Route 87 (Beeline Highway).

Separate section(s) or subsection(s) dealing with the Nation's 600 acres (or all lands to the West of the Preserve DMP) must be added to the Draft Area Plan. These separate sections would establish planning goals and policies that are unique to the lands to the west of the Preserve DMP, including Nation's 600 acres. Finally, the Nation wants to emphasize that these requests are land planning requests and not zoning requests.

CHANGES FROM EXISTING AREA PLAN TO THE DRAFT AREA PLAN

A comparison of the language of the Existing Area Plan versus the Draft Area Plan clearly show severe negative impacts for the Nation's 600 acres. I have attached an exhibit that compares and contrasts Land Use language between the existing Area Plan and the Draft Area Plan (See Exhibit A).

The Draft Area Plan encourages the R190 zoning as a policy and objective The R190 zoning is not an appropriate planning policy or objective for the Nation's 600 acres. The Nation agrees that the overall character of the area should be rural. However, we believe that the Draft Area Plan goes too far in that regard and is inconsistent with the existing Area Plan. The Draft Area Plan is overly driven by the natural land features (e.g., topography) of the existing and future housing developments to the east of the Preserve in the Goldfield Ranch subdivision. Those land and development characteristics on the eastern portion do not accurately reflect the land characteristics and the best future uses of the lands west of the Preserve DMP.

The changes set out in Exhibit A (and numerous others) would unfairly inhibit development proposals on the Nation's 600 acres. Any proposed DMP submitted under the existing Area Plan would stand a much greater chance of success than a DMP submitted under the Draft Area Plan. For example, the existing DMP supports requests for increased densities of up to 1.0 dwelling unit per acre and provides policies for considering those requests.[1] The existing Area Plan even recognizes that densities greater than 1.0 du/acre will be proposed and provides policies for considering those requests. [2]

In contrast, the Draft Plan provides little guidance for any future development. It merely encourages that all residential development have densities no greater than those allowed by R190 zoning and discourages most commercial (See Exhibit A). Therefore, there will be relatively no standards upon which to evaluate future developments (if they would be entertained at all).

SOUND PLANNING SUPPORTS THE NATION'S REQUESTED CHANGES TO THE DRAFT AREA PLAN

In addition to the Nation's concerns regarding the decrease in the value of its land, the Nation believes that the Draft Area Plan has not been prepared as a future planning document. Rather, it is a restrictive document reflecting the existing land uses and does not provide realistic planning for future development on the Nation's 600 acres. The 600 acres are appropriate for the development suggested by the Nation.

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[1] See e.g., Subsection I, Growth Guidance, page 85, Policy I-1, "Permit residential densities up to Rural Residential/High on fee simple lands east of the Verde River only if the associated infrastructure, public facility and service requirements are met and the improvements meet or exceed County guidelines as suggested in policies 1-4 and I-5 (emphasis added)." Policy I-2, "Support requests for increased density on the east side of the River up to a maximum of 1 dwelling unit per acre if a Development Master Plan is submitted; the total site area contains less than 75% hillside area; and if the baseline Hillside preservation standards for Rural-190 are met. In any event, if no or very little hillside areas exist on the site, a minimum of 30% of the site shall be retained in its natural sate as an incentive for allowing the increased density (emphasis added).

[2] See Subsection H, Public Facilities and Utilities, Policy H-5, page 85, "Permit residential development that exceed one dwelling unit per acre only if adequate community water and sanitary sewer systems are provided (emphasis added)."

The Draft Area Plan states that the only growth opportunity for the entire revised area is within the approved Preserve DMP. The Nation objects to this wide reaching statement for numerous reasons, including the Nation's 600 acres have extensive direct access to the Beeline Highway and have more favorable topography for development. Given the 10 to 15 year planning cycle, this statement is not acceptable from a future land planning standpoint for the Nation's 600 acres. More appropriately, growth opportunities should be limited to the Preserve and those lands west of the Preserve.

I. RESIDENTIAL LAND USE

With regard to the Nation's request for a policy permitting up to two homes per acre (Large Lot Residential), that request is reasonable. Most significantly, the Nation can deliver urban infrastructure and services.[3] Therefore, the current lack of existing services on the site is not a persuasive reason to deny this requested density for the 10-15 year planning horizon of the Draft Area Plan. Rather, the Draft Area Plan should state what other policies would provide guidance for such density, as is currently contained in the existing Area Plan.

You have correctly noted that the Nation's 600 acres are currently listed as rural residential/low in the existing Area Plan. However, numerous changes have occurred since 1995 which support increased density on the site. First, the Forest Service owned the land in 1995 and it had no interest in any increased density. The fact that the Forest Service listed the land for an exchange supports that the Forest Service expected development on the Nation's 600 acres. Next, the Nation purchased the land several years later knowing that the existing Area Plan was in place and future development at some point in the future could and would be forthcoming. Other changes include the increased population in the County, the near build out of the City of Fountain Hills, the enormous increase in the Rio and Tonto Verde areas to the North, and the additional residential and commercial development on the Nation's lands. These changes, along with the other reasons cited in the Nation's earlier comments (e.g., topography, direct access to the highway, adjacent to the higher density Preserve DMP, removed from the existing low density residential development on the east side of the planning area, etc.), support the Nation's request for a future planning policy for its 600 acres.

II. COMMERCIAL LAND USE

The Draft Area Plan would discourage commercial development except home-based businesses and equestrian facilities. This strong presumption against commercial development is inconsistent with the existing Area Plan, which recognizes that commercial development is permitted (See Exhibit A). Commercial uses "will be

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[3] With regard to water in particular, the Nation can use its surface water rights. These surface water rights are a replenishable source of water and would not: 1) interfere with other parties' water rights, 2) negatively affect existing or future homeowners at the Goldfield Ranch subdivision, or 3) negatively affect groundwater. Because of the Nation's water rights, its development would have zero impact on groundwater.

permitted" as a part of the planned development pattern under the existing Area Plan. [4] Conversely, under the Draft Area Plan, the policy is to "Discourage commercial or industrial." See Exhibit A for additional examples.

According to the Draft Area Plan, the projected population for the revised planning area is up to 7,000 persons and 56 acres of commercial land is needed to support this population. For the reasons detailed in its earlier comments, the Nation proposes a policy permitting a reasonable amount of commercial space on lands west of the Preserve and adjacent to the Beeline Highway (i.e., not to exceed 50 acres).

The Draft Area Plan currently states that there may be some potential for neighborhood retail or service development within the Preserve master planned communities. Good land planning practices dictate that this potential for retail, service and office development should also be identified for properties along transportation corridors, such as a portion of the Nation's 600 acres adjacent to the Beeline Highway. Furthermore, if there is no commercial development to support the area, all residents will be forced to drive through the reservation to get basic services. This increased traffic will cause the precise problems on the Nation's reservation that the current homeowners located in the revised planning area are trying to avoid.

COORDINATION BETWEEN THE PRESERVE DMP AND THE AREA PLAN

In addition to this Area Plan Update, there is an ongoing amendment to the Preserve DMP which is within the revised planning area. The Preserve lands are a large portion of the revised planning area. The results of each process will likely have affects on the other process for all parties involved. Without knowing the proposed final result of both actions, it is impossible competently respond to the other.

To illustrate this point, the Preserve amendment (and the existing DMP) places all of the high density residential development on the western portion of its property (adjacent to the Nation's reservation, its 600 acres, and Greyhawk Development's 80 acres). The Preserve's proposed density adjacent to the 600 acres is as high as 2.01 homes per acre and lot sizes as small as 8,750 square feet. If the Draft Area Plan is not revised to permit higher densities (subject to certain policies, objectives, etc.) on the Nation's 600 acres, the Nation would object to the placement of all of the high density next to the 600 acres and the reservation. Conversely, if higher densities are permitted on the 600 acres, then we would be less likely to object to that configuration because like uses and densities would be adjacent. Also, until the residential densities for the Preserve are finally decided, it is difficult to assess the appropriate amount of commercial space. Therefore, the DMP Amendment and the Area Plan Update must be reviewed and approved by the Planning and Zoning Commission and the Board of Supervisors concurrently.

[4] Existing Area Plan, Land Use Plan, pages 98-99.

REGULATORY LANGUAGE

The language of Objectives in Draft #2 has been revised to include "regulatory" type language, rather than policy or planning language. For example, Objective ED1.1, Executive Summary, Economic Development, has been changed from "Promote" rural, low density residential land uses to "Utilize" rural, low density residential land uses. These changes are not appropriate for a planning document.

Please contact us if you have any questions.

Very truly yours,

Mark A. Horvath
Attorney at Law

Cc: Brian McCabe/Maricopa County Planning and Development
John Verdugo/Maricopa County Planning and Development
Tom Bruckman/Goldfield Ranch Homeowners Association
Virgil Dutton/Goldfield Ranch Homeowners Association
Tom Parsons/Goldfield Ranch Homeowners Association
Joe Sedlmayer/Goldfield Ranch Homeowners Association
Bob Waldo/Goldfield Ranch Homeowners Association
Don Kile/Goldfield Preserve Development
Wendy Riddell/Berry & Damore
Randy Haines/Goldfield Ranch Concerned Citizens Group
Raphael Bear, President, Fort McDowell Yavapai Nation
Orlando Moreno, Fort McDowell Yavapai Nation Enterprises
Drew Ryce/Fort McDowell Yavapai Nation
Brain Baehr/Grayhawk Development
Don Stapley, Maricopa County Board of Supervisors
Max Masel, Chair of the Maricopa County Planning and Zoning Commission
Larry Lazarus, Lazarus & Associates

Enc: (1)

Prepared for:

FOUNTAIN FOOTHILLS
LIMITED PARTNERSHIP

[illegible]

Prepared by:

CORNOYER
HEDRICK

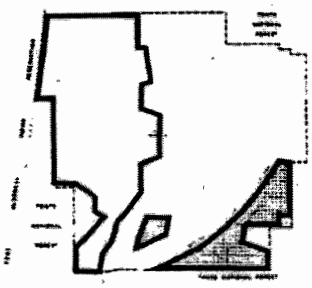
[illegible]

LEGEND

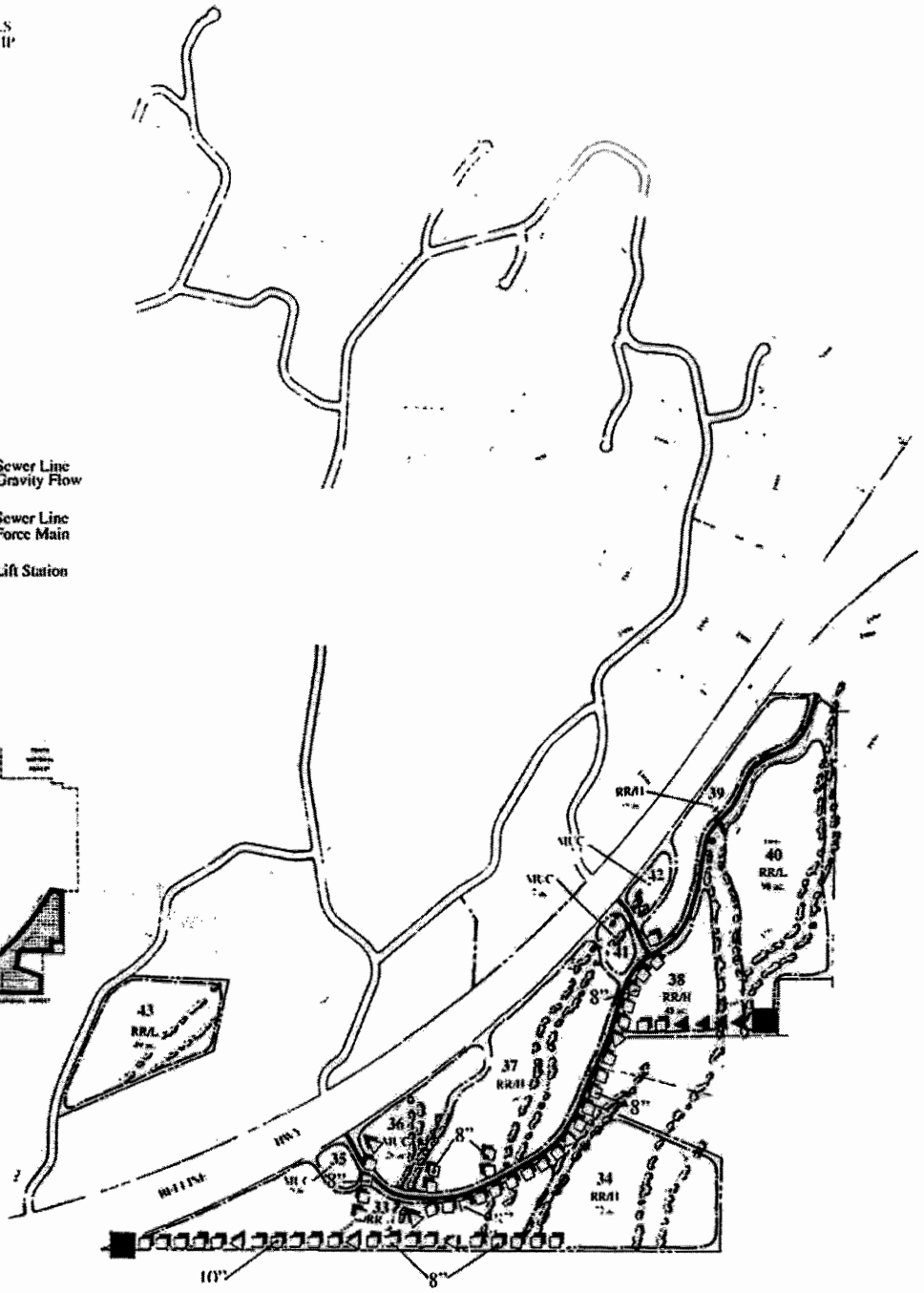
Sewer Line
Gravity Flow

Sewer Line
Force Main

Lift Station



KEY MAP



Revised July 25, 1994
Revised September 30, 1994

The Preserve

MARICOPA COUNTY ARIZONA

SEWER SYSTEM

Exhibit C

Prepared for

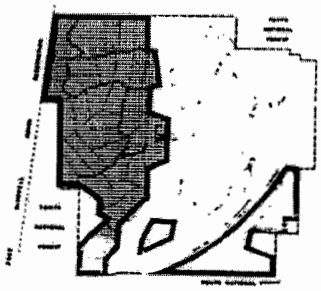
FOUNTAIN FOOTHILLS
LIMITED PARTNERSHIP

6910 Fifth Avenue
Scottsdale, Arizona 85251
(602) 949-7144

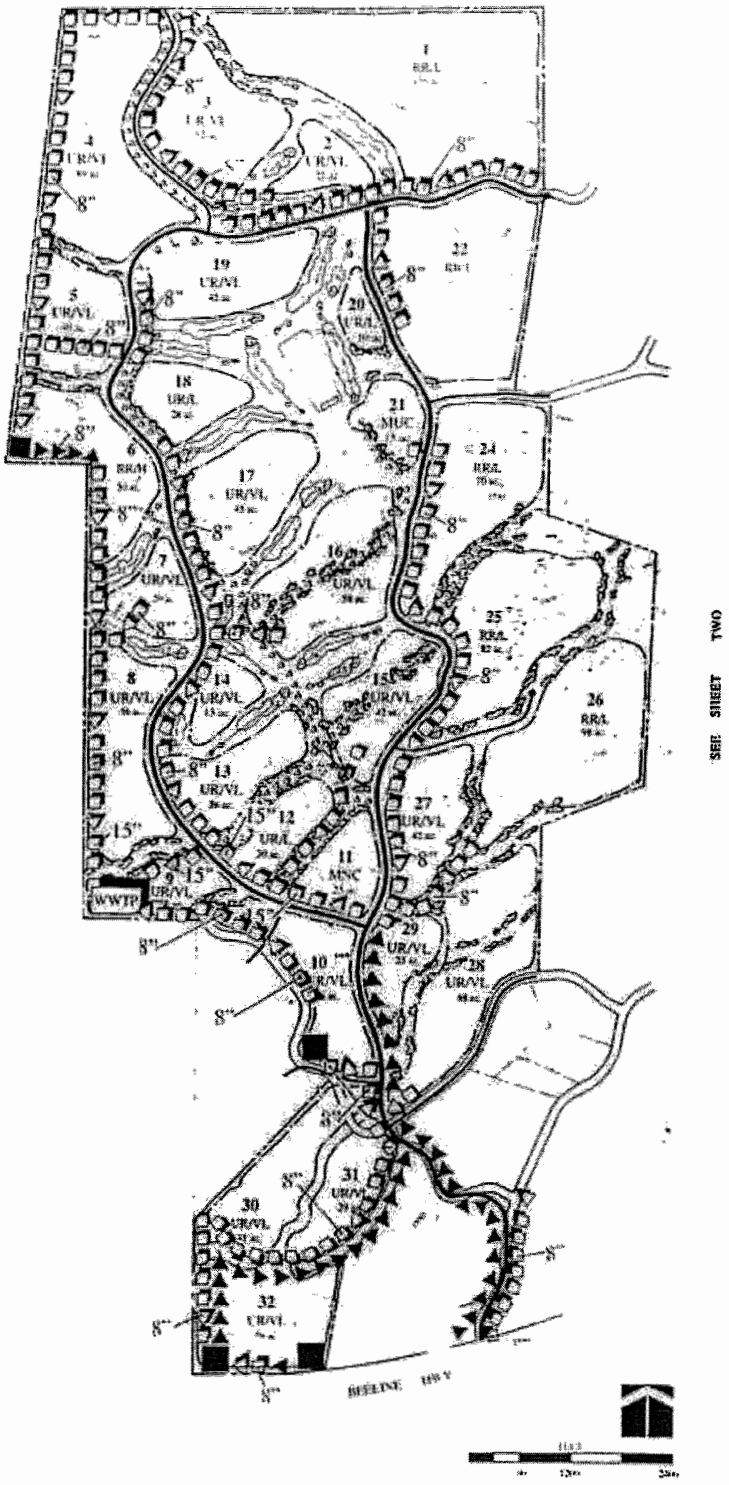
Prepared by

CORNOVER
HEDRICK

2425 East Camelback
Fourth Floor
Phoenix, Arizona 85016
(602) 381-4848



KEY MAP



LEGEND

Sewer Line Gravity Flow

Sewer Line Force Main

Lift Station

WWTP — Wastewater Treatment Plant

December 29, 1992
Revised April 29, 1993
Revised July 25, 1994
Revised September 30, 1994

The Preserve

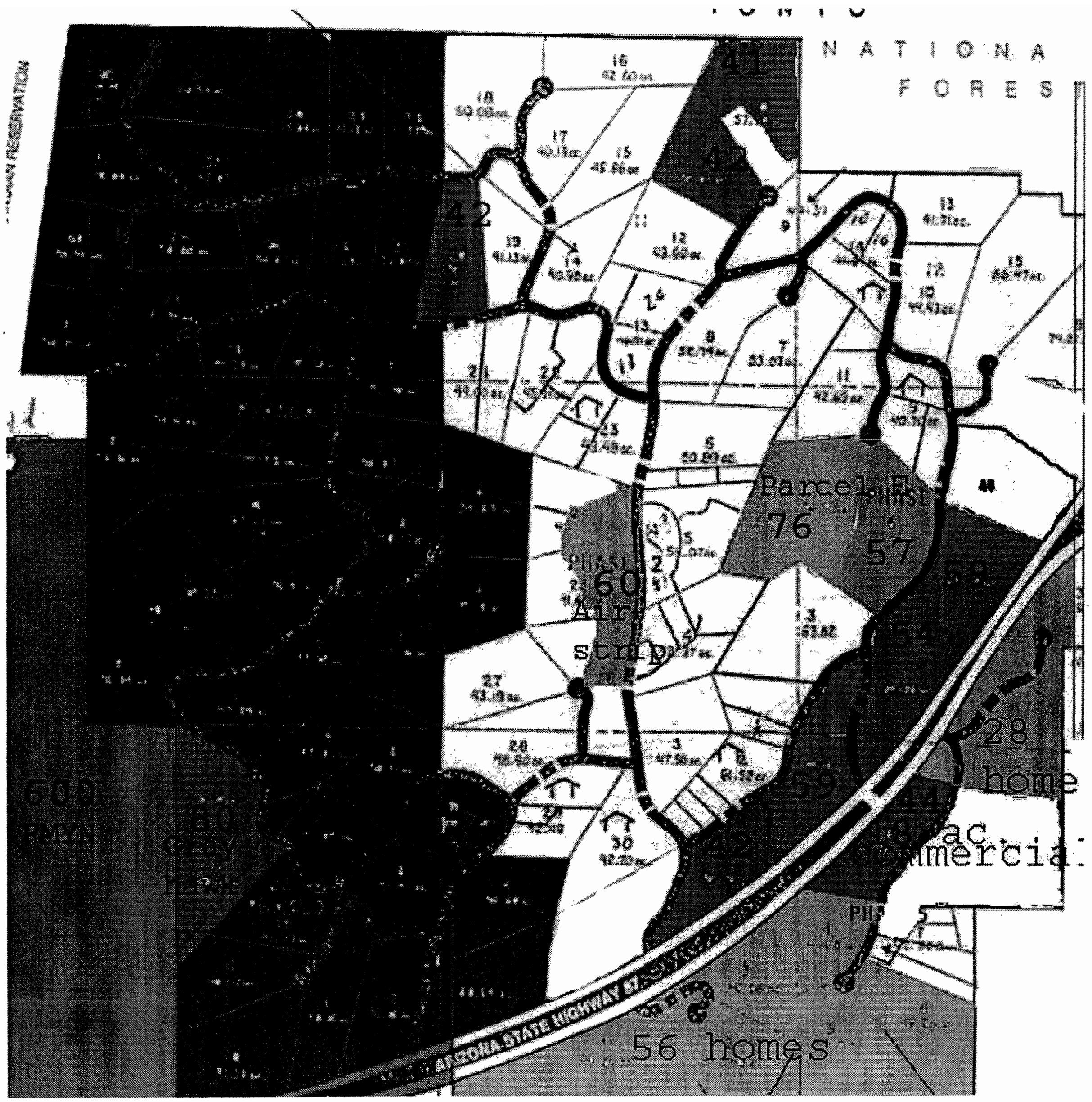
MARICOPA COUNTY, ARIZONA

SEWER SYSTEM

SHEET 1 of 2

Exhibit C

Exhibit D


N A T I O N A
F O R E S
41
42
42
Parcel E
76
57
59
54
60
Air
strip
28
home
44
8 ac.
59
600
80
56 homes
ARIZONA STATE HIGHWAY

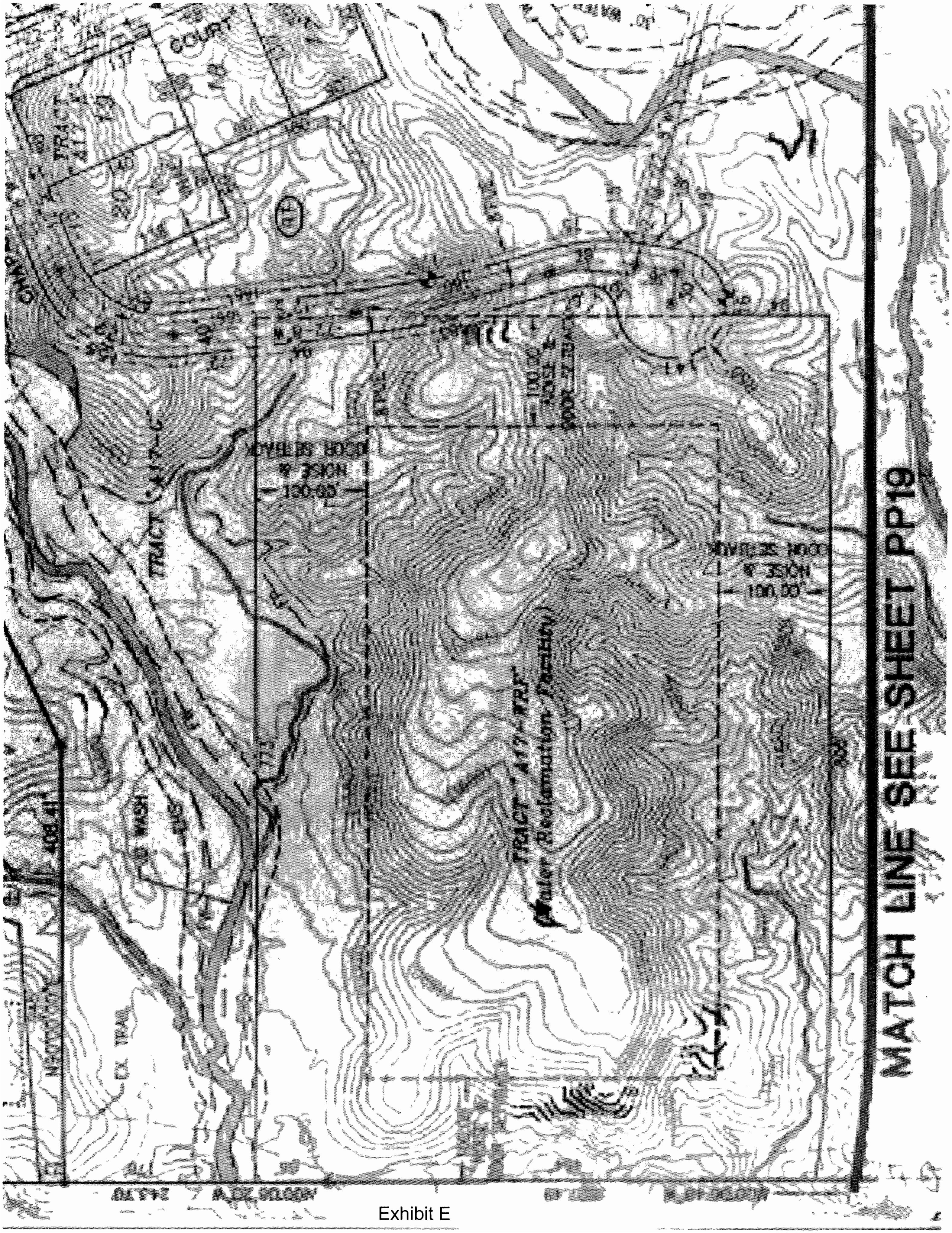

MATCH LINE SEE SHEET PP19
TRACT A17-WRF
(Water Reclamation Facility)
TRACT A17-C
NOISE & ODOR SETBACK
100.00'
COURT

Exhibit E

SECONDARY TREATMENT
SECONDARY TREATMENT
HEAD WORKS/ INFLUENT PUMP STATION
ELECTRICAL BUILDING
UV DIS
30' CLARIFIER
ODOR CONTROL
PUMP STATION
30' BACKWASH TANK
FILTRATION SYSTEM
CHLR ROOM
EFFLUENT PUMP STATION
50' EFFLUENT TANK
TRACT
NOISE &
100.00'

Exhibit E

Julie Hoffman

From: S. Splettstoesser [ssplettstoesser@yahoo.com]
Sent: Monday, April 07, 2008 6:49 PM
To: Julie Hoffman
Subject: The Preserve meeting Wed.

One more question as per the Preserve proposed system.
How will this sewer system be monitored and how often.
Will we be able to get a report of the inspections?
Thanks again,
Suzanne Splettstoesser

Julie Hoffman

From: S. Splettstoesser [ssplettstoesser@yahoo.com]
Sent: Monday, April 07, 2008 6:33 PM
To: Julie Hoffman
Subject: The Preserve meeting on Wed.

April 7, 2008

Dear Ms. Hoffman,

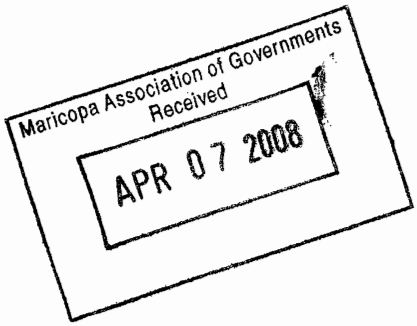
I have a concern that I would like to share about the proposed sewer system for the Preserve.
One concern is the fact there is no alternative space provided on the plans. Even when we do a private septic system we must have an alternate space in case ours may fail. This system for the Preserve is a relatively new concept and I see no area left for leakage or any other problem that could arise and necessitate another area being used after contamination of one area. I don't see flash flooding being addressed and in researching this that should be a major concern too because of the parasite control that may necessitate, especially when so close to washes.
Is this site to be a high powered reverse osmosis and then hydrogen peroxide and ultra violet light followed by a filter of sand and rock? Sand and rock may be a good extra measure for sanitation but it could also leave an area that is not effective in sealing in case of groundwater infiltration. A cohesive soil may be better when washes are so close.
It may be essential to explore the function of this sewer system with regard to drainage of groundwater during or after heavy rains. This site is at a very vulnerable location. Overuse of the system or a seam leak or any leak could cause serious damage to a local river.
Has a separate piping for gray water been explored? Since this is all new development, it would be possible to put that into the requirements for building all the houses there. It would be excellent

to use for any outside irrigation.
Thank you for taking the time to address my questions.
Suzanne Splettstoesser
Goldfield Resident
13745 N. Goldfield Rd.
Ft. McDowell, AZ 85264
480-471-5804

Berry&Damore LLC

Wendy R. Riddell, Esq.
(602) 616-8771 Mobile
wr@berrydamore.com

April 4, 2008



Via U.S. Mail to:

Mr. and Mrs. Randy Haines
12140 North Sin Vacas Trail
Ft. McDowell, Arizona 85264

Re: MAG 208/ The Preserve at Goldfield Ranch

Dear Mr. and Mrs. Haines:

As a lawyer, Mr. Haines, I am certain that you recognize that accusing another lawyer of violating ethical rules is a serious allegation. Such an allegation should only be made with complete knowledge and understanding of the facts. Absent such knowledge, making that allegation is itself inappropriate.

The draft minutes of the Water Quality Advisory Committee Hearing of March 20, 2008 state that Chair Klingler inquired about the parcel to the west of Goldfield Preserve that was not included in Parcels A or B, but on the same side of the ridge line. I replied that there are two parcels to the west of the Goldfield Preserve; one owned by the Fort McDowell Yavapai Nation and an 80-acre parcel owned by Grayhawk. The draft minutes state "She (Wendy Riddell) mentioned that the 80-acre property is currently planned for five acres or larger. Ms. Riddell stated that the Goldfield Preserve is not aware of any development plans and they so speak with Grayhawk with some regularity. She added that to the best of their knowledge, Grayhawk has not filed any development plans for the site, other than it is zoned one house per five acres, which is roughly 18 houses." This answer was not a "material misstatement of fact" as you allege, but rather the truth. Grayhawk has not filed with the County any development plans for the site.

While you concede in your letter that "development plans" is not a "defined legal status", it is a misstatement for you to go on to suggest that a General Plan (defined in the County as an Area Plan) or even Master Plans (specific Area Plans) for areas that have laid dormant and undeveloped for over a decade qualify as "development plans". Perhaps you are unaware that the County, by statute, has Area Plans for the entire County, and that this is a guiding policy document rather than an actual "development plan." There are also Master Plans that have been approved in the County, and that these subsequently require rezoning actions and site planning approvals from the County before "development" can occur. Your correspondence further states that we must consider "the plain meaning of those words." Here, I agree. I have practiced law in Arizona since 1998. My area of emphasis is land use. My good faith understanding of what was asked of me at the hearing was whether there are any

approved plans to actually develop the property, such as an application submitted to the County's Planning Department. There are none.

To date, other than a few single family lots, no applications to develop property in Goldfield Ranch outside of the The Preserve are pending.

Regarding the specifics of your claim, you assert that I was aware of "development plans" for Grayhawk's property located on the west side of The Preserve service area because Grayhawk was excluded from the recently approved update to the Area Plan, ergo they must have "development plans". You refer to the Grayhawk letter dated March 6, 2007 (the "Subject Letter"). As I understand it, in an effort to secure their exclusion, Grayhawk sent the Subject Letter and conceptual bubble plan to County planning staff demonstrating why they did not want to be included in the update. You have conceded that the Subject Letter describes Grayhawk's "conceptual development plan." Indeed, the bubble plan attached to the Subject Letter reads "Illustrative Development Plan." None of these plans were ever submitted to the County's planning staff as applications. To date, Grayhawk has not submitted an application to Maricopa County to develop their property. Therefore, my good faith belief was, and is, that there is no "development plan" in existence. It would be wholly inappropriate for me to speculate as to Grayhawk's development intentions, if any, based upon their request for an exclusion from an Area Plan.

You further assert that because a portion of the Development Master Plan approved in 1995 (some thirteen years ago), remains in effect on a site separated by both a State Highway and significant topography from the proposed wastewater service area, I should have been aware of "development plans". Again, to my knowledge, no applications to rezone or otherwise develop this property have been filed with the County other than a few lots subject to the Master Plan that have been developed with custom homes.

Mr. Haines, we have been meeting with you since my client first went into escrow on this site over three years ago. Though we have not always agreed, I have always treated you respectfully, honorably, and ethically. I simply ask that you show me the same professional and personal courtesy. I take my professional integrity very seriously. We have confirmed with our firm's outside ethics counsel, Lynda C. Shely, that I have fully complied with any obligations under E.R. 3.3.

Very truly yours,

Wendy R. Riddell

WRR

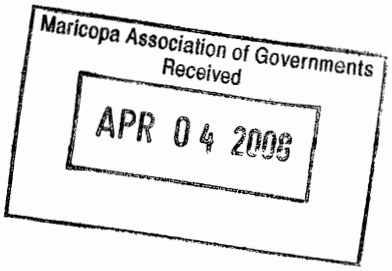
cc: Mr. Kevin Chadwick
Roger Klingler
Supervisor Don Stapley
Dr. Carole Klopatek
Julie Hoffman, MAG
Lynda C. Shely, Esq.
Patricia Perna
Don Kile

GOLDFIELD CONCERNED CITIZENS' ASSOCIATION

Kathy Haines, President
12140 N. Sin Vacas Trail, Ft. McDowell AZ 85264
Email: haines@agilebroadband.com Phone: (480) 980-4661

April 2, 2008

Ms. Wendy R. Riddell, Esq.
Berry & Damore, LLC
6750 E. Camelback Road Suite 100
Scottsdale, Az. 85251



Re: The Preserve at Goldfield Ranch

Dear Ms. Riddell:

At the March 20 meeting of the MAG Water Quality Advisory Committee, you told the committee that we had notice of your MAG Small Plant Approval process because we attended a meeting of the Technical Advisory Committee of the Maricopa Planning and Development Department on February 5. Your statement was disingenuous, at best. You know the only reference to your MAG process made at that TAC meeting was that Goldfield Preserve Development had so far failed to obtain its MAG permit. That comment gave us no notice of: 1) the inadequate capacity of the plant; 2) your client's intent to inject the treated sewage into the aquifer; 3) your client's reliance on an alleged confining clay layer to protect the Verde River from being polluted by this plant; 4) the fact that your client had not made the required analysis of whether the plant should be designed to accommodate future development of nearby parcels; or, most importantly, 5) the fact that MAG's 208 Plan required you to ascertain the views of neighboring landowners, which you had never done, or 6) that there was a scheduled hearing on your application, at which public participation was welcome. Indeed, your client has gone out of his way to convey the false message to neighboring landowners that they have no role to play in the planning and design of this plant, and that in effect it is none of their business, because there would never be any opportunity for any neighboring land development to "shirttail" on the wastewater treatment for the Preserve.

And when we did find out about the March 20 hearing before the Water Quality Advisory Committee, I sent you an email on the morning of March 18 asking you to send me a copy of your application **by email**, and also asking two questions about the process; see attached email. You never responded to my email nor answered my questions, and you did not send me a copy of your application by email. Instead, you **mailed** a copy, under a cover letter dated two days later – the day of the hearing – but not postmarked until the day after the hearing.

Although we disagree with your apparent view that neighboring landowners have to ask to be notified, please be on notice that this is that request. Henceforth, please provide the

Concerned Citizens, at this address, with **contemporaneous** notice and copies of **every** communication that your client, and/or any of its agents, has with **any** governmental (or public utility) office or official that has any bearing on the development of the Preserve at Goldfield Ranch. This is intended to include, but not be limited to, any applications filed, any information supplied in connection with any application, any comments received with respect to any application, and any scheduling of any hearings.

Sincerely,

Randy Haines

Kathy and Randy Haines, Pres. and Sec'y
Goldfield Concerned Citizens' Association

cc: Mr. Roger Klingler
Ms. Julie Hoffman
Mr. Jason Stephens

From: haines@agilebroadband.com
Subject: MAG 208 approval for Preserve
Date: Tue, March 18, 2008 9:21 am
To: "Riddell, Wendy" <wr@berrydamore.com>

We learned at the February TAC meeting that the Preserve has not obtained approval of its MAG 208 application, which apparently is some kind of permit necessary for wastewater treatment plant. Could you please:

1) Send me by email a copy of the application for that permit;

2) Describe where you are in that process and when you anticipate it to be concluded; and

3) Describe what the problem has been in getting that permit issued?

Thanks for your response.

Randy Haines, Secretary
Goldfield Concerned Citizens Association

Download this as a file

GOLDFIELD CONCERNED CITIZENS' ASSOCIATION

Kathy Haines, President, Phone: 480 980 4661
12140 N. Sin Vacas Trail, Ft. McDowell AZ 85264

March 31, 2008

Ms. Wendy R. Riddell, Esq.
Berry & Damore, LLC
6750 E. Camelback Road Suite 100
Scottsdale, Az. 85251

Re: MAG 208 Small Projects Review of The Preserve at Goldfield Ranch

Dear Ms. Riddell:

Arizona Ethical Rule 3.3 requires you to correct the false statements of material fact that you made to the MAG Water Quality Advisory Committee on March 20.

In response to a question from Committee Chairman Roger Klingler, you stated that you had no knowledge of any development plans for the large parcels located near the Preserve in Goldfield Ranch. That statement was materially false, and known by you to be false, in at least two significant respects.

1. **You Have Knowledge of Development Plans for Two Nearby Parcels.** First, you do have knowledge of the development plans of Grayhawk Development for its 80 acre parcel immediately adjacent to the Preserve. I enclose a letter to Maricopa County Planning and Development Department dated March 6, 2007, from Grayhawk Development. It describes Grahawk's "conceptual development plan" for those 80 acres, including residential development of up to two homes per acre. You had knowledge of that development plan because you are shown as a "cc via email" on that letter.

Second, you also have knowledge of the 1995 Development Master Plan that remains in effect for the 125 acres lying between Preserve Parcels C and D. Your own DMP Amendment for the Preserve dated July 2, 2007, specifically recognizes that "Included in the 1995 DMP are 125 acres of land within portions of Parcels 37, 39, 40, 42, and all of Parcels 38 and 41 located south of SR-87, consisting of mixed-use commercial and residential uses." DMP Amendment at 10. Your DMP Amendment also states that "the DMP Amendment does not amend any portion of these 125 acres," and "The 1995 DMP is valid and enforceable today." *Id.*

Indeed, you not only have knowledge of the commercial zoning under the 1995 DMP, but you argued to the Maricopa Planning and Zoning Commission that it should be maintained, and you *opposed* our efforts to terminate that plan in early 2007. Your efforts to preserve the commercial plans for those 17.6 acres as part of the 1995 DMP were successful.

Of course we recognize neither of these parcels is yet zoned for such development. But "development plan" is not a defined legal status, and both of these are undeniably development plans within the plain meaning of those words. Grayhawk's letter describes its plan as a "conceptual development plan," and the plan for the 125 acres between Parcels C and D is part of a "Development Master Plan." It was a false statement for you to tell the Committee that you had no knowledge of such development plans.

And the misleading effect of your false statement was exacerbated both by its timing and by another misleading statement you made. You made the claim to having no knowledge of any development plans only in your rebuttal comments, knowing that no one would have an opportunity to correct your misstatement. In such circumstances, a lawyer has a greater ethical duty to "inform the tribunal of all material facts . . . whether or not the facts are adverse." *Cf.* Ethical Rule 3.3(d). And you stated that the recently adopted Goldfield Area Plan helps ensure development will be limited to residential development no more dense than one house per 4.36 acres, despite knowing that the Grayhawk parcel was expressly excluded from the scope of that area plan because of Grayhawk's plans for much higher density.

2. Your Misstatements of Fact Were Very Material. The existence of both of these development plans is very material to the issues before the Committee. Table 4.53 of the MAG 208 Areawide Water Quality Management Plan requires the applicant for small plant approval to identify whether certain areas lend themselves to being included in the service area, whether nearby areas should be sewered for water quality or economic reasons, and whether nearby areas wish to join the proposed plant. We noted both in our letter of March 20 and in our oral presentation that your application failed to address any of those issues, except to reference 5-acre parcels already developed with septic systems. The point of the question, and your answer, was apparently to demonstrate that there was no need to address such issues because there were no nearby areas for which any development plans exist. Your denial of knowledge of any such plans was highly material to those issues.

More significantly, both of these large tracts of land would have to be sewered under the existing development plans. Grayhawk's plan calls to up to two homes per acre, and Maricopa County requires sewer for homes on ½ acre lots. The 1995 DMP calls for 17.6 acres to be developed for commercial uses, and Maricopa County requires commercial property to be sewered.

The existence of these development plans was also especially material because they would exceed the capacity of the water treatment plant that is being proposed. Just the 160 homes on Grayhawk's adjacent 80 acres would generate 51,200 gpd, which would exceed the 0.4 mgd capacity of the planned facility.

3. Ethical Rule 3.3 Requires Remediation.

Finally, the ethical rule makes clear that when a lawyer "has offered material evidence and comes to know of its falsity, the lawyer shall take reasonable remedial measures." Ethical Rule 3.3(a)(4). We believe this requires you to disclose to the Water Quality Advisory

Committee why you made the knowingly false statement to the Committee; all of the facts you or your client could ascertain by questioning the owners of the nearby parcels about their development plans; an analysis of whether such plans would require sewers; and an explanation of why it does or does not make economic or water quality sense to design your treatment plant to accommodate those plans.

Sincerely,

Randy Haines

Kathy and Randy Haines
Goldfield Concerned Citizens Association

cc: Mr. Kevin Chadwick, P.E.
Roger Klingler
Hon. Don Stapley
Dr. Carole Klopatek
Julie Hoffman, MAG

Grayhawk™
Development

March 6, 2007

Matt Holm
Principal Planner
Maricopa County Planning and Development Department
501 North 44th Street, Suite 200
Phoenix, AZ 85008

Re: Goldfield Ranch, Phase III, Lots 13 and 14

Dear Matt:

Grayhawk Development is the developer for Goldfield Ranch, Phase III, Lots 13 and 14, which are owned by Four Peaks Holdings, LLC. The site area is approximately 80 acres and is currently zoned Rural-190. Grayhawk is creating a conceptual development plan for this area. We request that our plan be incorporated into the Maricopa County Eye To The Future 2020 Goldfield Area Plan that is currently being updated by the County Planning and Development Department. We propose that the future land use for Lots 13 and 14 to be designated as 1-2 units per acre. Please reference the enclosed illustrative development plan.

- **Location**

Goldfield Ranch is located on State Route 87 approximately five miles east of Fountain Hills. Lots 13 and 14 of Phase III are each 40 acre parcels located on the western edge of the Goldfield Ranch community. The 600± acres adjacent to the west are privately owned by the Fort McDowell Yavapai Nation and were acquired in the 1990s through a land exchange with the United States Forest Service. The adjacent property to the north, east and southeast is approximately 1,600± acres known as The Preserve at Goldfield Ranch and is owned by Goldfield Preserve Development, LLC. This owner recently submitted a request to amend the Development Master Plan that was approved for this property in 1995. Please reference the attached location map.

- **History**

Since 1993, the mission of Grayhawk Development has been to create unique projects that enhance the quality of life for our residents while at the same time honoring the intrinsic value of the natural Sonoran Desert environment and the history of the land. With focus on this purpose, Grayhawk has developed master planned communities of uncompromising quality, beauty and sensitivity.

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Grayhawk Scottsdale is a 1,600 acre master-planned community that embraces a broad mix of housing types, two championship golf courses, numerous neighborhood parks, 31 miles of multi-use trails, schools, retail shopping, dining, medical campus, office and commercial development with neighborhoods that people want to call home. The distinctive landscape and architectural palette of this community complements and respects the natural desert environment.

Whisper Rock Estates/Sevano Village is a 1,000 acre community in north Scottsdale comprising two golf courses and 400 units consisting of townhomes, villas, semi-custom homes and custom home sites ranging from one to almost five acres. This extreme low density environment offers timeless natural beauty and allows the neighborhoods to blend seamlessly with the desert surroundings.

Grayhawk Development is familiar with the Goldfield Ranch area. We became enticed with the rural character and charm of the area in 1997 when we first had the opportunity to purchase the Preserve at Goldfield Ranch. Grayhawk's planning and engineering team spent well over two years evaluating the Preserve property and is extremely familiar with the entire site. While Grayhawk was not successful in acquiring this property, we did purchase Lots 13 and 14 in 2000.

Since 1993, Grayhawk Development and their representatives have made it a priority to communicate with the local neighbors and neighborhood organizations regarding any of their development plans.

- **Request**

Our various development plans for the 80 acres in Lots 13 and 14 results in 1-2 units per acre with a minimum of 20 to 25 acres (30%) of open space. We request that our plan be incorporated into the current update for the Goldfield Area Plan and reflect the land use for Lots 13 and 14 as 1-2 units per acre. Access to the 80 acres will be via existing dedicated roadways shared with the Preserve development and other Goldfield Ranch property owners. We believe our plan is consistent with the goals, objectives and policies identified in the Goldfield Area Plan, Draft 1 dated January 2007. We are committed to an efficient land development plan that is compatible with adjacent land uses, sensitive to the natural desert environment and that sustains the rural character, charm and lifestyle of the area.

- **Environmental Conditions That Support Goldfield Area Plan Goals, Objectives and Policies**

Topography and Slope Conditions. The topography for the general Goldfield Ranch area slopes from the northeast to the southwest where Phase III, Lots 13 and 14 are located. The elevation ranges from a high of 1,800 + in the northwest to 1,500± feet in the southwest portion. The area is characterized as undulating terrain with short, steep slopes in the northeast and shallower slopes to the southwest. The flatter terrain and lower elevations of 1,550 – 1,600 in Lots 13 and 14 provide more land area to accommodate 1-2 units per acre. The adjacent properties

surrounding Lots 13 and 14 to the west, north, east and southeast have similar topography and would also support 1-2 units per acre.

Vegetation. The Goldfield Ranch site is typical of the Sonoran Desert environment. **However, approximately 75% of the Lot 13 and 14 property was badly burned in a fire in the 1990s.** The Sonoran Desert plant palette features a diverse mix of desert trees, shrubs, ground covers and cacti. The remaining native plants on Lots 13 and 14 consist of small trees including Palo Verde, Catclaw and Mesquite; shrubs such as Creosote, Bursage, and Saltbush; and cacti including Saguaro, Barrel, Hedgehog, Prickly Pear and Cholla. The smaller shrubs and cacti are growing back fairly well in the years since the fire, while the larger trees and cacti are still struggling. Our development plan of 1-2 units per acre allows for significant revegetation of natural area open spaces and wash corridor areas. Grayhawk Development has expertise in revegetation and restoration of the natural desert environment through the course of construction at both Whisper Rock/Sevano Village and Grayhawk Scottsdale and will use this knowledge to restore the burned areas with a native indigenous plant palette.

Open Space. The existing wash corridors through Lots 13 and 14 will remain as open space and will be enhanced with native desert landscaping to create a riparian habitat. Enhancing the wash corridor landscaping provides an opportunity to extend open space connections to the adjacent properties. The plan for 1-2 units per acre incorporates approximately 20-25 acres (30%) of meaningful open space on the property.

Major Washes. Grayhawk Development and their planning and engineering team have carefully mapped the 404 washes and flood planes through the 80 acre site. The 1-2 units per acre development will allow for storm water to be conveyed through the existing washes on the property.

Lighting. The development plan for Lots 13 and 14 will incorporate design standards that minimize lighting to respect and preserve the dark, night skies. Street lights are not proposed for the property. Lighting will be restricted to low landscape light and wall sconces to provide safety lighting at night.

We believe that the existing and proposed entitlements adjacent to the three sides of the property (The Preserve DMP) as well as the environmental conditions outlined above substantiate our proposed development of 1-2 units per acre on Goldfield Ranch, Parcel III, Lots 13 and 14. We ask that the County Planning and Development Department support the change in the land use designation on these parcels to 1-2 units per acre and include our request in the Goldfield Area Plan update report.

Thank you for your assistance in this matter. Please contact us if you have any questions.

Sincerely,

GRAYHAWK DEVELOPMENT

Brian Baehr
Vice President

Enclosures

Cc via email: John Verdugo/Maricopa County Planning and Development, w/enclosures
Brian McCabe/Maricopa County Planning and Development, w/enclosures
Orlando Moreno/Fort McDowell Yavapai Nation, w/enclosures
Mark Horvath/Fort McDowell Yavapai Nation, w/enclosures
Randy Haines/Goldfield Ranch Concerned Citizens Group, w/enclosures
Tom Bruckman/Goldfield Ranch Homeowners Association, w/enclosures
Virgil Dutton/Goldfield Ranch Homeowners Association, w/enclosures
Tom Parsons/Goldfield Ranch Homeowners Association, w/enclosures
Joe Sedlmayer/Goldfield Ranch Homeowners Association, w/enclosures
Bob Waldo/Goldfield Ranch Homeowners Association, w/enclosures
Don Kile/Goldfield Preserve Development, LLC, w/enclosures
Wendy Riddell/Berry & Damore, LLC, w/enclosures

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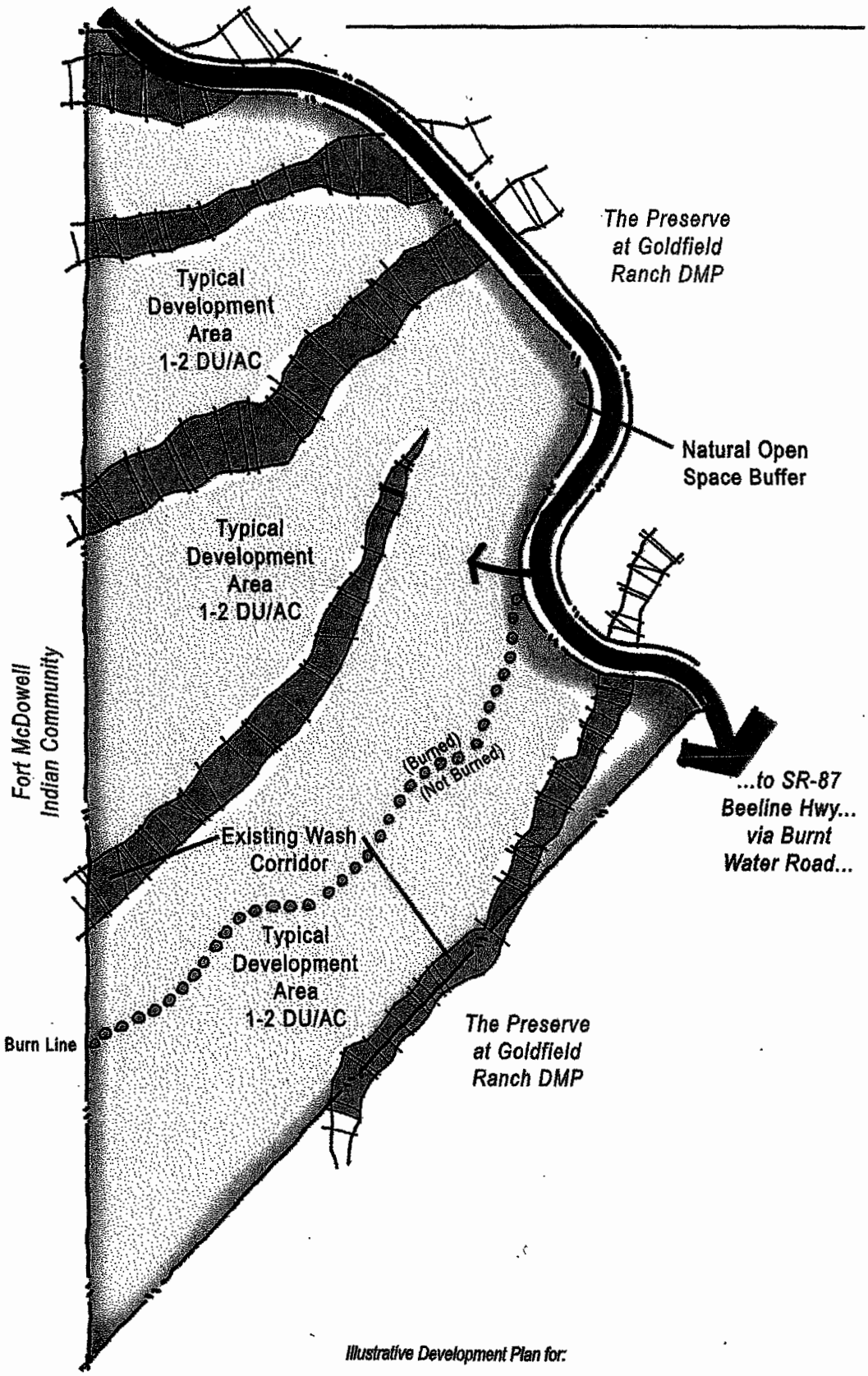

Illustrative Development Plan for:

GOLDFIELD RANCH PHASE III - LOTS 13 & 14

TOMORROW ASSOCIATES, P.C.
community planning
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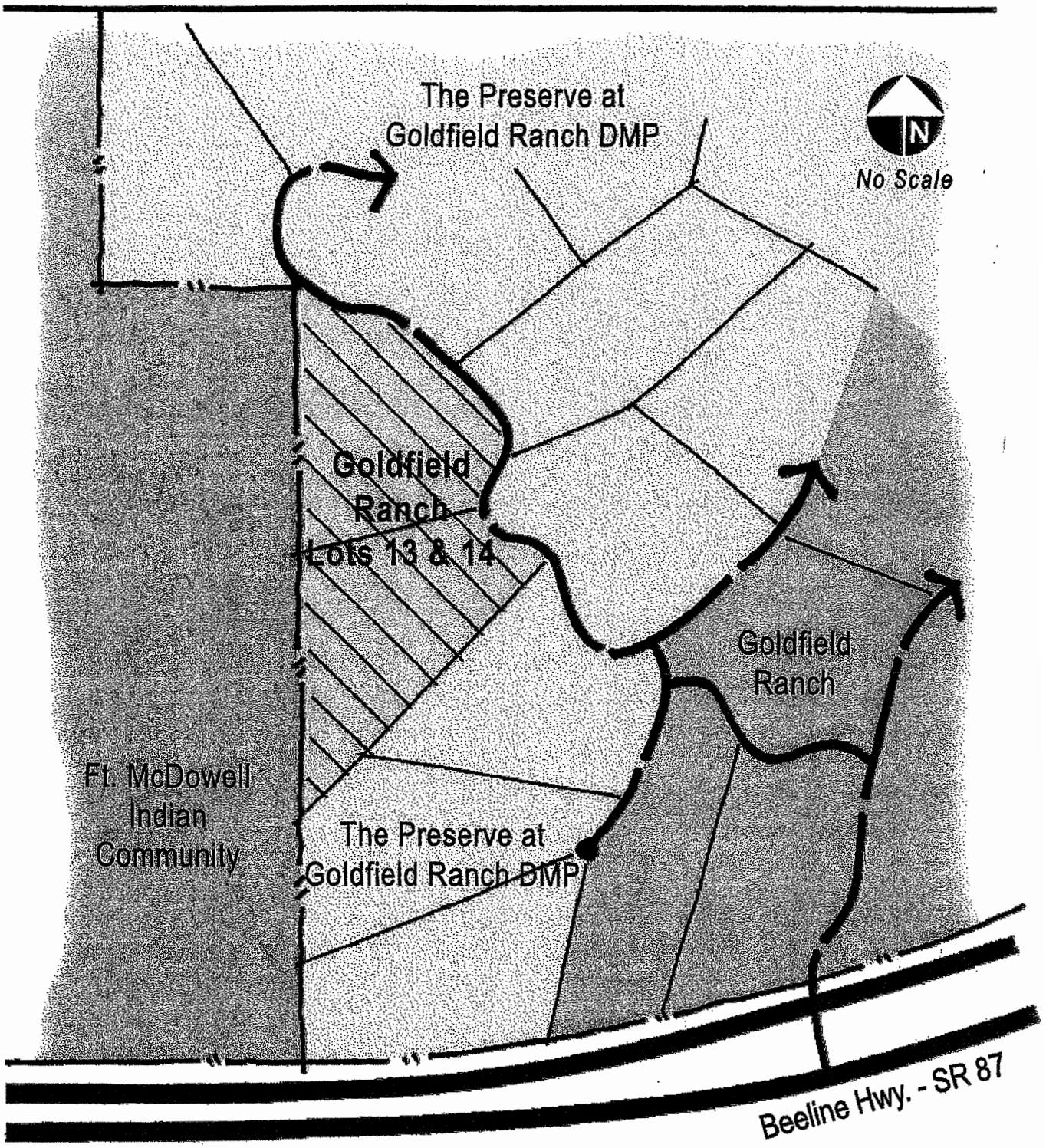

Location Map for

GOLDFIELD RANCH PHASE III - LOTS 13 & 14